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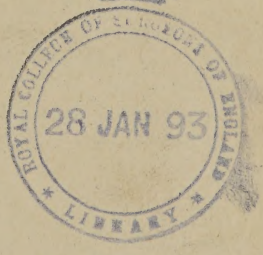

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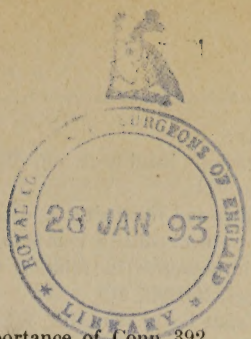
INDEX



Abrams, Albert, pulmonary atelectasis as a cause of anemia, 187
Adenoid vegetations in young children, disorders provoked by, Barton, 283
Adler, Lewis H., Jr., anal fissure, 638
Adulteration laws, 290
Allen, nitrate of strychnine for inebriety, 59
R. L., how to cure gleet, 665
Alopecia, Paschkiss, 590
Amaurosis, puerperal, McGillicuddy, 169
America, will we have cholera in? 114
Anal fistula, Guyon, 647
fissure, Lewis H. Adler, Jr., 638
abscess, Dujardin-Beaumetz, 647
Anæmia, saline enemata in acute, Neustube, 252
and mountain air, Lancet, 280
lack of hæmatine the cause of, Maurel, 489
Anæsthetics, bromide of ethyl, Barton, 286
prevention of fatalities in the use of, Kelly, 598
recent physiological and chemical research in, Brixton, 597
Andrews, E. Wyllys, improved method, etc., for radical cure of hemorrhoids, 631
Antisepsis, intestinal, Juettner, 619
Antiseptic, microcidine, Mabboux, 87
paracresotate, of soda, Le Progr. Med., 156
sulphate of zinc as an, in typhoid and cholera, Med. Press, 493
Apoplexy, heat, hyperpyrexia, death, Williams, 432
Appendicitis, Browne, 434
Armand, J. A. de, typhoid fever, 351
Armstrong, S. T., treatment of hemorrhoids, 635
Asphyxia by submersion, Brouardel, 284
Asthma, hay, Tissier, Mackenzie, Leflare, Lemoyez, 523
Astigmatism, corneal, and total subjective, after mydriasis, G. E. de Schweinitz, 558
Ataxy, first signs of locomotor, Fournier, 365
Atelectasis, pulmonary, as a cause of anæmia, Albert Abrams, 187
Atkins, Francis H., Las Vegas, N. M., as a health resort for consumptives, 328
Atmospheric tractor, C. C. Gentry, 643
Atresia after labor, Petit, 252

Bacillus tuberculosis, rapid staining of, etc., Letulle, 285
Bacteria, importance of, Conn, 392
Bactericidal action of alexin, Hankin, 439
Baker, Sidney J., Bedford City, Va., 61
Barkley, D. M., typhoid fever, 447
Bath, the first, Wolfe, 224
Batteries, dry-cell, Ernest B. Sangree, 110
again, 226
Blackwood, 194
chloride of silver, S. V. Clevenger, 359
Bed clothing for the sick, Asclepiad, 440
Bedford City, Va., Sidney J. Baker, 61
springs, Waugh, 133, 222, 241
Bidwell, W. Davidson, Aiken, S. C., as a health resort for consumptives, 322
Bing, E. W., a correction, 198
syncope following local use of cocaine, 381
medical theories, past and present, 378
Bite of a leopard, Simpson, 122
an adder, Nature, 190
Blackwell, Dr. Elizabeth, the matriculation of, 445
Blackwood, W. R. D., dry-cell batteries, 194
reply to Dr. Sangree, 249
injuries from electricity, 292
electricity in gynæcology, 215
Bladder, irritation of, H. B., 60
Book notices:—
Alcoholism, cause and cure of, 361
Alienist and Neurologist, 500
American Therapist, Aulde, 140
Anatomia Completa del Hombre, Martinez, 460
Annual of the Universal Med. Sciences, Sajous, 12
Atlas of Clinical Medicine, Bramwell, 537
Bandaging, Principles and Practices of, Davis, 360
Cardiac Outlines, Ewart, 82
Cerebral Meningitis, Barr, 12
Darwin and after Darwin, Romaines, 460
Diagnosis of diseases of the nervous system, Herter, 12
Essentials of medicine, Solis-Cohen and Eshner, 360
Dictionary of medicine, a new pronouncing, Keating, 140
Directory, Medical and Dental, for Penna., New Jersey and Delaware, Keil, 460
Dosimetric granules, outlines of treatment with, Waugh, 361

Book Notices:
Emergencies, hand-book of, Bradford and Lewis, 511
Gonorrhœa and Urethritis, Lydston, 460
Higher medical culture, Dunham, 63
Hygienic measures in relation to infectious diseases, Nuttall, 616
Illinois state board of health, 361
Inoculation a preventive of the swine plague, Billings, 407
Jurisprudence, medical and toxicology, Chapman, 460
Kidneys and bladder, diseases of the, McNutt, 511
Literature, contributions of physicians to, Kenner, 361
Manslaughter, involuntary, State of Arkansas vs. Dr. Geo. E. Petley, 361
Materialism, and the modern physiology of the nervous system, Thompson, 63
Medical matters mentioned in jest, Selah, 460
Medication, ready guide to specific, Niederkern, 616
Medico-Quirurgical Americana, Milliken, et al, 460
Obstetrics, King's Eclectic, Wintermute, 118
Ophthalmology, text book of, Fuchs, 511
manual of clinical, Hansell, 616
Physician's leisure library, Bulkley, 547
pocket day book, Leonard, 548
Practice of Medicine, manual of the, Stevens, 616
Prescriber's pharmacopœia, Kemp & Co., 12
Prescriptions and favorite formulæ, 616
Railway officials' directory, 12
Sanitation, principles and practices of Maritime, Holt, 361.
Science and art of midwifery, Lusk, 12
Skin, diseases of the, Shoemaker, 360
Surgery, American text book of, Keen and White, 360
Surgical paraphernalia, Yarnall Co's catalogue, of 361
Table talk, 140
The Scalpel, Mitchell, 12
Throat, diseases of the, Bosworth, 140
Use of water in modern medicine, Baruch, 63
Varicocele and its treatment, Lydston, 12
What to do in case of accident, Ricketts, 63
Wilhite, P. A., memorial of, 361
Bougies, iodoform, La Med. Moderne, 497
Brazil, barbaric, Brit. Med. Jour., 143
Bright's disease, Villacabras mineral water in, 487
Lancereaux, 490
Bronchocele, Auerbach, 84
Bronchus, foreign body in the, d' Angelis, 88
Brown-Sequard, in re, Pochl, 284
Bryant, J., rheumatic fever, 457
vesical irritability, 643
Buboes, dermatol in, Foscholo, 546
abortive treatment of, Welander, 207
Burial alive for seventeen days, Lancet, 238
Burns, antiseptic treatment of, Maylard, 29
in children, Wertheimber, 286
of the cornea, Reynolds, 414
carbolic, or salicylic acid for, Bardeleben, 440
Business habits, ed., 333

Cæsarean operation, a successful, Winternitz, 591
Calculi in the prepuce, Beller, 83
Cancer, an infectious miasmatic disease, Fr. Hul, in La Normandie Med., 669
treatment of, G. Sims Woodhead, 130
of the rectum, Cripps, 276
a new treatment of, Carpenter, 123
Cancrum oris, unusual termination of a case of, 430
Cantani's treatment in cholera, 443
Cardiac affections, subcutaneous injections of digitalis, Zienetz, 467, 589
Cases, a class of, found in the office of every physician, Cordier, 128
Chancre on a child's genitals, Kudrasheo, 437
Chancellor, C. W., eastern shore of Maryland as a resort for consumptives, 319
Chenery, Elisha, gonorrhœa, 510
some thoughts on typhoid fever, 682
Child's food, a growing, Scoville, 488
Cholera, Asiatic, 122
in New Orleans, Jos. Jones, 295
resorcine in, 623
acid prevention of, S. V. Clevenger, 298
and cremation, Sir Spencer Wells, 408
anti-scapulary, Le Progr. Med., 494
atropine in, Koroltchuck, 463
artificial immunization of animals against, Klemperer, 433
Botkin's drops in, 463, 546
Cantani's treatment of, 306, 443
citric acid as a sterilizer of water during, Christmas, 496
chloroform in, Desprez, 433, 496
clam-juice against, 301
clinical forms of pernicious, Gaillard, 672
concerning (ed.), 426
dangerous suggestion in the treatment of (ed.), 299
delivered from the scourge of (ed.), 404
Dr. Shakespeare on Ferran's treatment of, 298
on, Ledger, 341
dosimetric treatment of, Waugh and Burggrœve, 307
epidemic of, in Rouen, in 1873, Olivier, 367
Ferran's treatment of, and the Biological Society of Paris, Deut. Med. Zeitung, 619

Cholera, Gaillard on, 462
Granja, E. de la, on 419
Haffkine's treatment of, Hankin, 409
Hahnemannian treatment of, Pacific Med. Jour., 316
in Antwerp, T. C. Sangree, 570
in Hamburg, Rieder, 461
in the municipal hospital at Berlin, Guttmann, 411
in time of peace prepare for war, Waugh, 301
in Kashmere, 141
Lazarus, 366
Lewis, Louis, 297
the march of, Brit. Med. Jour., 120
means of preventing the invasion of, (ed.), 300
news of the, (ed.), 138
not necessarily a fatal disease, Shade, 196
origin and diffusion of, Cornish, 342
oxygen and hot baths in, Trivus, 463
propagation and prevention of, Monod, 207
Parkin, 383
Peter, 524, 589
possible electrical treatment of, S. V. Clevenger, 665
post-mortem phenomenon in, Hosp. Gaz., 317
proceedings of Académie de Med. a Paris, on 460
of the Berlin Med. Society on, 461
quarantine as a safeguard against, Lancet, 407
quinine in, Neidzwiecki, 463
rags! (ed.), 300
regulations of the Prussian government, Marcus, 497
salol in, Loewenthal, 498
Mitropolsky, 463
Indian Med. Record, 316
search for a prophylactic for, Hosp. Gaz., 367
spread of, (ed.), 167
strychnine in, Joshua Duke, 585
Ffrench-Mullen, 342
success in the treatment of, (ed.), 404
salient points in the treatment of, abstracted from Lebert, Loomis, Davis, Fothergill, Niemeyer, Bartholow, Brown-Séquard, Stevens, McClellan, Roberts, Johnson, Sedgwick, Murray, McNamara, Ringer, Waring, Potter, Strumpell, Samuel, Shattuck, Fagge, Hueppe, Groneman, Harkin, Ritter, Hayem, Williams, Cantani, Penna, Pernice, Josias, Illingworth, Mangen, Mosse, Winternitz, Ross, Comerford, Loewenthal, Duboue, Hehir, Brown, Brunton, Clark, Aitken, and Maclean, 301
therapie of, Rosenbach, 498
Times and Register's polyglot rules, in English, German, Italian, and Jargon for prevention of, 308
Cholera, treatment of, Daremberg, 366
therapeutic review, 202
Cholera infantum, Wilson, 11
F. F. Loughead, 4
abstract from the Medical World, 13
arsenite of copper in, Sangree, 59
calomel in, Colter, 11
formulæ for, 12
morbus, Van Santvoord, 443
Choose a specialty, Nevin B. Shade, 8
Chorea, congenital, Wyman, 391
exalgin in, Dana, 433
habit, S. V. Clevenger, 571
Clevenger, S. V., acid prevention of cholera, 298
chloride of silver, dry batteries, 359
Erichsen's disease, 369
medico legal testimony, 37
melancholia reaction, 615
possible electrical treatment of cholera, 665
Cline, W. S., typhoid fever, 356
Clinics at the Philadelphia hospital, 445
Club foot, etc., A. B. Judson, 372
Coates, T., coccyodynia, 429
frontal neuralgia and dysmenorrhea, 275
Lupus vulgaris, 713
miscarriage, 198
rheumatoid arthritis, 458
spinal paralysis, electro-diagnosis, 712
Cobleigh, E. A., typhoid fever, 345
Cocaineanesthesia, Leyman, 713
Code, a new or no? (ed.), 192
Codeine, effects of an overdose of, Mettenheimer, 68
Coffman, J. H., typhoid fever, 358
Cold, catching, Gould Smith, 587
Coeliotomy, Cordier, 622
College, the Toledo Medical, and the Illinois State Board of Health, 210
a peripatetic, 274
Colter, calomel in cholera infantum, 11
Constipation, anti-pills, Huchard, 30
mechanical treatment of, Beatty, 430
Constriction, elastic, Senn, 438
Consumption in the Eastern shore, Md., Fanning, 406
chronic, late in life, Mackenzie, 463
tobacco as a means of immunity in, 82
Consumptives, Eastern-shore of Maryland as a health resort for, C. W. Chancellor, 319
Pecos-valley of New Mexico, Thornton Parker, 323
Southern Rocky-mountain region, W. N. Sherman, 325
Las Vegas, N. M., Francis H. Atkins, 328
Southern Pines, N. C., W. F. Waugh, 329
Reading, Pa., F. W. Frankhauser, 330
Tennessee mountains, Dice, Neilson, et al, 335
Lampasas, Texas, A. H. Graham, 336

Consumptives, Las Cruces, N. M., A. Petin, 338
Southern California, Edwards, 340
health resorts for, T. C. Duncan, 335
health resorts for, W. P. Roberts, 337
Cornea, foreign bodies in the, Edward Jackson,473
Correction, a, Bing, 198
Correspondence, private, Strock and Forrest, 274
Corson Hiram, how shall we conduct a labor? 217
Cough, bromoform in whooping, Duncan, 144
post-grippal spasmodic, Oddo, 485
Croup and suffocative laryngitis, Bogot, 388
Cuffman, penetrating wound of the knee-joint, 275
Cunningham, 697.
General Practitioner as a Gynecologist, 697
Curiosity, a, 117
Cystitis, salol in acute and chronic, Arnold, 83, 590
treatment of, asked for, J. M. R., 61
with complications, J. M. R., 541, 714

Daland, Judson, dysentery in Nicaragua, 563
Death, following an intro-uterine injection of perchloride of iron, Pletzer, 86
apparent, in cholera, Lancet, 140
Deaver, John B., treatment of hemorrhoids, 649
Delirium-tremens, Kerr, 488
Delivery (mal), corrected by genu-pectoral position Med. World, 588
Dental decay, etiology, etc., Sewell, 260
Dentist, the office of public-school, Lancet, 407
Dentistry, a piece of, Thompson, 184
Dermatol for ulcerated surfaces, 69
Diabetes mellitus, quick recovery, etc., W. F. Waugh, 398
insipidus, 439
jambul in, V. E. Lawrence, 405
Diagnosis, and treatment wanted, Hurd, 274
Diarrhœa, summer, Bartine, 14
Edson, 15
Mardorf, 15
green, Hayem, 14
in children, Ross, 15
infantile, Roux, 15
salicylate of bismuth for, Mikhnevitch, 16
hill, Combie, 16
sulpho-carbolate of zinc in, McCall, 16
acute dyspeptic, Osler's Practice, 17,
bismuth in, Colosanti, 440
dermatol in, Colosanti, 488
chronic and muscular pains in, C. M. Lenhart, 381
Dice, Neilson, et al., Tennessee mountains as a health resort in consumption, 335
Digestion, papoid for (ed.), 404
orexin hydrochlorate for, Rizzi, 434
Digestive disturbances of children, opium in Med. and Surg. Reporter, 27
Digitalis, uses of, Lewis, 429
Dilatation, and curetting, Noble, 228
Dimon, an obstetric curiosity, 169
Diphtheria, arsenite of copper in, Latta, 119
phenol sulpho-ricinate in, Le Progr. Med., 88
chromic acid in, Lescure, 496
peroxide of hydrogen in, Richardson, 621
peroxide of hydrogen in, (ed.), 404
and pseudo—(ed.), 658
increase of, in Philadelphia (ed.), 404
treatment of, Rademaker, 281
Dosimetric granules, best list for pocket-case, Ellis. 33
Drainage and water supply in city (ed.), 456

Dressings, aristol for surgical, 500
of wounds, soda salicylate in, Hall, 492
Drowned, resuscitation of the apparently, 156
Laborde, 252, 466
Drunk or dying, Occidental Med. Times, 442
Duke, Joshua, strychnine in cholera, 585
Duncan T. C., resorts for consumptives, 335, 539
Duodenum, torsion of the, 427
Duties, individual, 380
Druggist, the, as purveyor, Weekly Med. Review, 548
Dysentery, epidemic, Herman D. Marcus, 268
ipecacuanha in, Hart, 466
in Nicaragua, Judson Daland, 563
Dujardin-Beaumetz, hepatic affections, 566
Dysmenorrhœa, massage of the lumbo-sacral region for, L'Union Med. de Canada,86
Dyspepsia, Young, 491

Ear, extraction of foreign bodies from the, 417
maggots in the, Dolph, 488
Eclampsia, puerperal, Poole, 431
nitro-glycerine treatment, R. M. Harbin, 577
Eclectic, American, Medical College of Cincinnati, Layne, 59
Eczema, with angina pectoris, G. W. Story,575
Editorial resignation, 273
Egypt, as a health resort, Sandwith, 525
Electric shock, treatment of, McCann, 193
light as an anodyne, Gatchkowski, 430
batteries, chloride of silver in, S. V. Clevenger, 359
Electrical applications, moderate vs. strong currents in W. H. Walling, 243
batteries, sub voce "Batteries"
Electricity, treatment of injuries from, W. R. D. Blackwood, 292
natural and physiology, Quarrie, 147
coloration of preserves by, Kochler, 209
in the veterinary art, 209
new system for production of, Peignot, 209
Electro-Therapeutic Association, America, 210, 290, 445, 478
notes, Mosso, 209
Emergency, cases of, W. F. Waugh, 78
Waugh's, Hancock, 198
Endowment orders (ed.), 536
Enteric fever, proceedings of the Irish Royal Acad. of Med., 363
Enuresis (ed.), 538
Epilepsy, strange case of, Weekly Med. Review, 27
Jacksonian, following traumatism, Nance, 59
subcutaneous injection of normal nerve substance in, Baber, 415
the Pasteur anti-rabic injections in, de Giovanni, 433
Epistaxis, bromide of strontium, or potassium in, Deny, 434
etiology and therapeutics of, S. J. Radcliffe, 422
treated by the "Umbrella Fashion," T. G. Stephens, 587
Erichsen's disease, S. V. Clevenger, 369
Ergotism, Kortneff, 408
Erysipelas, of the face, sublimated ether spray in, Talamon, 156
relation of phagocytosis to, Bokenham, 411
d'Amore on, La France Medicale, 497
Erythromelalgia, Senator, 671
Ethics, medical, vs. the preachers, 57

Ethics, revision of the medical code of, Post-Graduate,469, (ed.), 537

Fanning, consumption in the Eastern-shore, Md. 406
Fever, bilious malarial, Wesselowski, 197
Field, F. T., synovitis of the knee-joint, 405
Filaria sanguinis hominis, Manson, 465
Filter, the "Chamberland," bacteriological researches in, Lacour, 157
Fistula, sub voce "Anal"
Flat-foot, treatment of, Dane, 552
Food, artificial, Machell, 26
fifth exposition of pure, 617
Formulæ for prevention of the spread of diphtheria, Smith, 190
gastralgia, 239
cholera, Asiatic, Mitchell, 248
Wile, 443
Asclepiad, 443
infantum, Sonnenberger, 288
diarrhœa, nervous, Nothnagel, 288
diarrhœa, in children, Sympson, 288
chronic gout, Garrod, 265
diuretin, 288
alcohol habit, Balte, 624
baldness, Whitla, 205
Brown-Sequard's, Med. Press, 204
bryonia alba in pleurisy, etc., Therapeutic Rev., 204
butyl chloral in facial neuralgia, Physician and Surgeon, 203
dyspepsia, Simon, 624
earache, 430
electuaries for gonorrhœa, Le Progr. Med., 206
extemporaneous glycerine suppositories, Gaz. de Gynecologie, 205
five, for pruritus ani, Laplace, Bartholow, Heath, Besnier, Waugh 648
five, for coryza, ozena, etc., Revue Internat de Rhinologie, etc., 494
goitre, synovial cysts, etc., Dury, 204
guajakol for phthisis, Oliva, 288
hemorrhoids, Union Medicale, 288
hemorrhoids, Western Surg. and Med. Reporter, 624
antiseptic powder, American Druggist, 204
ichthyol, externally in gynecology, Freund, 389
diphtheria, Richardson, 69
functional impotency, Med. Age, 69
whooping cough, Beale, 69
cystitis, Renaud, 87
anæmia, Dazac, 84
impetiginous eczema, Dazac, 84
constipation, Robinson, 154
difficult digestion, Falk, 154
hair tonic, Falk, 154
vomiting in pregnancy, Fry, 154
vomiting in pregnancy, Federow, 87
sea-sickness, Meccrisse, 84
gonorrhœa, Bing, 84
substitute for the opiates, Portier, 89
iodoformum deodoratum, Pharmaz. Zeitung, 288
incontinence of urine, Med. and Surg. Reporter, 203
leg ulcer, Hospital Gaz., 203
lupus erythematous of the face, Brit. Jour. of Dermatology, 204
myxœdema, Robin, 204
Formulæ, for neutralizing the odor of iodoform, Courier Medicale, 389
for neutralizing the odor of ichthyol, Bulletin Gen. de Therap., 389
phenacetine in urinary disorders, Green, 206
post-partum uterine colic, Rutherford, 468
purgative for children, 239
rheumatism, Staples, 437
C. M. Brucker, 459
turpentine injections in pneumonia, Frank, 204
vaginal injections, 282
vomiting, Coronedi, 624
vomiting, 437
for warty vegetations of external genital organs, 389
France, depopulation in, Le Roy, 403
Francez, J. P., malarial remittent fever, 396
Frankhauser, F. W., Reading, Pa., as a health resort for consumptives, 330
acute rheumatism, 459
French, perineal lacerations, 227
Frolich, Josef, the therapeutic application of salophen, 449
Fullerton, Anna M., the new womanhood, 35
reflections upon a "Mirror," 370
obstetric surgery with report of a Porro case, 605

Gaston, J. McFadden, compatibility of aggressive and conservative surgery, 553
Gastric, research, modern, Stockton, 101
Gastro-intestinal disorder, W. F., 541
General Practitioner as a Gynecologist, Cunningham, 697
Gentry, C. C., the atmospheric tractor, 643
Gestation, double tubal, Walter, 439
Gibbons, Rich. H., iodoform *vs.* aristol, 643
Gleet, how to cure, R. L. Allen, 665
Glycosuria, Nicholson, 465
Goelet, A. H., ovaritis, etc., treatment by electricity, 213
Goitre, pregnancy, etc., Joffroy, 184
Gonorrhœa, Elisha Chenery, 510
J. J. Paul, 511
W. F. Waugh, 501
Wyeth, 519
acute and chronic, Goldenberg, 514
at the Dermatological Congress, 515
antipyrine with bichloride of mercury as an antiseptic in, Watier, 88
editorial on, 509
on, Eclectic Med. Jour., 276
in the army, 509
potassium permanganate injections, Reverdin, 512
methyl blue in, Trintignau, 499
Neisser on, La France Med., 522
the "new" treatment of, Nordeman, 518
uncured, Palmer, 512
Gout, piperazine in, Schweninger, 440
Graham, A. H., Lampasas, Texas, as a health resort for consumptives, 336
Grancher, Prof., some complications of typhoid fever, 678
Granja, E. de la, cholera, 419
Gynecological literature, review of recent, Dixon-Jones, 230
Gynecology, why I use electricity in, W. R. D. Blackwood, 215
Jin-e-col-o-jy, Illinois Med. Jour., 221

Hæmatemesis of young women, Handford, 412

Hancock, Waugh's emergency cases, 198
Hall, E. T. W., treatment of typhoid fever, 710
Harbin, R. M., nitro-glycerine in puerperal eclampsia, 577
tympanites of typhoid fever, 706
Hardening the system, Abbe Kneipp, 32
Haynes, Francis L, typhoid fever, 354
Hazard, Geo. Stevens, why physicians should be educated pharmacists, 540
Headache, Weiss, 56
W. G. Stewart, 532
Hear both sides (Ed.), 191
Heart, physiology of the, Med. Record, 119
Heart tonics, editorial, 708
Hebra, in children, urticaria and prurigo of, Saalfeld, 205
Hematinic, new form of a valuable, W. H. Walling, 612
Hemorrhage through the uninjured skin, Derabin, 430
Hemorrhoids, treatment of, Frank S. Parsons, 633
S. T. Armstrong, 635
Geo. H. Kirwan, 643
Audhoui, 647
John B. Deaver, 649
external, Reclus, 647
diagnosis and surgical treatment of, Thomas H. Manley, 635
improved method of treatment, etc., E. Wyllys Andrews, 631
Health resorts, sub voce, "consumptives," "phthisis," "Egypt," "Mexico,"
Resort Association, America, 111
Public Association, America, 131
proceedings of Michigan State Board of, 112, 117, 469
report, weekly, of the Philadelphia Board of 104, 131, 158, 186, 211, 239, 265, 291, 394, 416, 576, 624
idem, for the six months ending July 2, 1892, 103
of the New York State Board of, monthly, 344, 549
Hepatic affections, Dujardin-Beaumetz, 566
colic, glycerine for, Ferrand, 85
Hernia, Marcy, 668
Herpes zoster, a case of, W. F. Waugh, 425
Holland, case of tape-worm, 226
Homœopathy, 69
Hospital, Philadelphia, the new clinical amphitheatre of the (ed.), 426
London, overtaxed by the scarlatina epidemic, 428
Chicago, the Charity, News-Record, 469
Hurd, E. P., diagnosis and treatment wanted, 274
typhoid fever, 352
Hurst, B. C., symphysiotomy, an operation, 476
Hydrocele, Hearn, 442
Hydrotherapy, does the prevailing method need reform? Schleicher, 671
Hygiene, a chapter on, 9
and the physician, Culmer, 252
Hymen, anatomy of the, Cullingworth, 283
Hyperidrosis of the feet, Brocq, 156
Hysterical patients, self-inflicted wounds of, Thiersch, 672

Iam's case at Homestead, Pa., and the surgeons. Lancet-Clinic, 212
Jour. of the Amer. Med. Association, 211
Ileo colitis, Van Goidsthoven, 16
Iliac fossa, disease of the, Reed, 383
Impotence, following typhoid fever, R. H. G. Rhea, Jr., 665
Indians, curative methods of the, Gorton, 200
Incontinence of urine, nocturnal, in children, St Phillipe, 384
Inebriety, secret specifics for, Kerr, 488
nitrate of strychnine for, Allen, 59
the "gold cure" of, and Church of England Temperance Society, Brit. Med. Jour., 132
Infants, management of, in hot weather, Philada. Board of Health. 30
ought, to be washed at birth? Med. News, 137
Indigestibility of certain articles, 114
Infectious diseases, G. and F. Klemperer, 102
specific inoculations in, Wasserman, 235
Inflammation, the theory of, 153
Influenza. E. S. McKee, 398
Insanity, some types of, Edward C. Mann, 42
Insects, pernicious influence of, in certain diseases, Correa, 206
Insomnia, treatment of, Lyon, 87
Intermittent malarial fever, Luther Sexton, 71
Internal organs, bruises of, Savory, 96
Iodoform, dangers of injections of, Drusman, 390
vs. aristol, Rich. H. Gibbons, 643

Jacobi, Mary Putnam, urethral irritation, 601
Jackson, Edward, foreign bodies in the cornea, 473
Jones, Joseph, Asiatic cholera in New Orleans, 295
medical properties of the water of Cooper's well, Miss., 395
summer complaints of children, 1
Mary A. Dixon, causes of sterility in women, 170
subjects relating to parturition, 159
shall mothers nurse their babies? 220
Judson, A. B., club foot, etc , 372

Kemper, G. W., case of labor with unusual complications, 164
Kidney, extirpation of tuberculous, Bajinsky, 28
displaced abnormal, with six renal arteries, Shepherd, 56
floating, influence of costume in producing, Kerangi, 284
King, J. W., typhoid fever, 705
Kirwan, Geo. H. hemorrhoids, 643

Labor, a case of, with unusual complications, G. W. Kemper, 164
importance of examination of the genital tract after, Duke, 184
how shall we conduct a? Hiram Corson, 217
Laparotomy, prevention of mural abscesses, etc., after, Hanks, 150
Laryngitis, exudative, a substitute for intubation, Palmer, 383
Larynx, a leech in the, Aubert, 403
extraction of a needle from the, Goris, 494
resorcine in tubercular ulcerations of the, Von Bymorsky, 590
Lawrence, V. E., jambul in diabetes, 405
Layne, the American Eclectic College, 59
Lenhart, C. M., chronic diarrhœa and muscular pains, 381
Leprosy, ordinance of the government of Malta respecting, 33
Lett, Stephen, the quantity of morphine taken by habitues, 405

Lewis, Louis, blood poisoning, 711
cholera, 297
uses of digitalis, 429
convenient remedies from field, garden, etc, 660
Losophan, Saalfield, 701
Loughead, F. F., cholera infantum, 4
Lupus exedens, solar cautery in, Thayer, 280
vulgaris, Coates, 713
Lydston, G. Frank, stricture of the urethra, 504
Lyman, E. H., cocaine anæsthesia, 713
Lysol, use and dosage of, Vondergoltz, 392

M. G. R., enlarged testicle and rupture, 197
Malaria, methyl blue in, Trintignau, 499
interrupted and conversion method of treating, Gray, 544
Malpractice, suits, Med. Review, 391
Manley, Thos. H., medico-legal testimony, 135
diagnosis and surgical treatment of hemorrhoids, 625
Mann, E. C., some types of insanity, 42
syphilitic nervous disease, 421
Marcus, Herman D., epidemic dysentery, 268
treatment of typhoid fever, 684
Mardorf, summer diarrhœa, 198
Maryland, Clinical Society of, 445
Massage, abdominal, Ivanoff, 264
Mastitis, cocaine in operations for, Rossier, 84
Materia medica, dosimetric, Chas. Everett Warren 245, 270
black beetles, Annual of Universal Med. Sciences, 442
cannabis indica, Mattison, 520
Maternal impressions, Sangree, 225
Spurgeon, 714
Matteism, an exposure of, Potter, 259
Mattison, cocaine poisoning, 428
McCann, treatment for electric shock, 193
McKee, E. S., influenza, 398
pleurisy, 580
pneumonia, 582
Medical corps, changes in the, of the army, navy and marine hospitals, sub voce "United States."
Clinical Society of Maryland, 666
education, a plea for cheap and nasty, (ed.),614
International Congress, 368, 408, 446
Pan-American Congress, (ed.), 614
Mississippi Valley Association, 417
Mississippi Valley Association, address of Hobart A. Hare, to the, 550,
National Association of Railway Surgeons, 660
practitioners and English politics, Lancet, 142
Society of the County of Philadelphia, Lewis Zeigler, 527.
Medicine, convenient remedies from the garden, field, etc., Louis Lewis, 660
in fiction, Brit. Med. Jour., 94
edict concerning stamped packages of,(ed.), 508
proceedings of New York Academy of, (orthopedic section), 594
proceedings of the American Orthopedic Association, 500
Medico legal testimony, S. V. Clevenger, 37
Thos. H. Manley, 135
Megrim, massage in, Eccles, 435
Melancholia reaction, S. V. Clevenger, 615
Mental derangements from organic sulphur compounds, Richardson, 488
Menthol, anti-emetic action of, Blanc, 389
Methylene for internal administration, Asclepiad, 441
Mexico as a health resort for consumptives, 549
Midwives, the licensing of uneducated, Rentoul, 233
Milk, boiled, Literary Digest, 26
Millard, Z, R., puerperal convulsions, 358
Mineral water, properties of the, of Cooper's well, Miss., Jos. Jones, 395
"Mirror," reflections upon a, Anna M. Fullerton, 370
Miscarriage, Coates, 198
prevention of, Watson, 383
Morphine case, J. G. Pace, 359
habitues, Mattison, 459
quantity taken by, Stephen Let', 405
Morrison, William H., three cases of cranial surgery, 45
Mosquitocide by kerosine, (ed.), 509
Murphy's button, Chicago Clin. Review, 552
Muscle building, Lippincott's Mag., 489
Myxœdema, Med. Abstract, 466

Nails, ingrowing, Parckhauer, 495
Narcosis produced by the bromide of ethyl, Gille, 287
Nasal affections, influence of, on the respiratory organs, Chabony, 205
intra, consecutive results of cautery in, Revue Internat, de Rhin., etc., 388
Nephritis, toxic, Lancereaux, 438
Neuralgia, frontal, and dysmenorrhea, Coates, 275
resection of peripheral end of nerves in, Pollosson, 29
Neurological number wanted, Coates, 714
Nervous centers, symptons supervening after operations on the, Pollosson, 29
shock, Roger, 589
system, debit and credit in the economy of the, Grashey, 145
Nolan, W. J., retained placenta, 274
sciatica treated by faradic current, 382
plethora and pruritus, 459
Nose, extended perforation of the cartilage of the, in typhoid fever, Gelle, 390
Nurse their babies, shall mothers? Mary A. Dixon-Jones, 220
N. Y. State Board of Health and Tammany Hall, 116

Obstetrical congress, the Brussels, 240
curiosity, Dimon
practice, ergot in, Baldwin, 551
number, (ed.), 167
Old age, diseases of, Grube, 549
Opium poisoning, belladonna and coffee as antidotes in, Samuel Wolfe, 136
Opium habit (ed.), 273
discussion of the, Indian Med. Gaz., 278
O'Reilly, W. J., typhoid fever, 353
Orientalist congress, medicine and the, Lancet, 407
Orthopedic Association, the American, 500
Osteoma of the frontal sinus, Pappert, 85
Ovariotomy, double, Pollaillon, 590
Ovaritis and ovarian neuralgia, treatment by electricity, A. H. Goelet, 213
Ovaries, removal of, followed by menstrual molimina, Grammatikati, 440
tired, Lanphear's Index, 519
Ovary, resection of the, Pozzi, 228
Oxytocic, ipecacuanha as an, Aertl. Pract., 499

Pace, J. G., a morphine case, 359
Parallel, the deadly, 324
Paralysis, agitans Charcot, 467
following diphtheria, Baginsky, 84

Paranoiac, Berkman a, Diller, 538
Parasitism, S. V. Clevenger, 570
Parker, W. Thornton, Pecos-valley, N. M., as health resort for consumptives, 323
suspensory bandage, 695
typhoid fever, 348
Parsons, Frank S., treatment of hemorrhoids, 633
Parturition, subjects relating to, Mary A. Dixon-Jones, 159
Patch, William, Typhoid Fever, 707
Patterson, R. S., for whooping cough, 715
Paul, J. J., gonorrhœa, 511
Pharmacist, why the physician should be an educated, Geo. Stevens Hazard, 541
Phagedena, Ghodal, in Calcutta Med. Reporter, 546
Peculiar case, 100
Pelvic disease and psychical disturbances in women, Roche, 393
Perineal lacerations, French, 227
Perineum, preservation of the, Turner, 230
Peritonitis, puerperal, Myers, 229
Perityphlitis, operation for, Centralblatt fur Chir., 485
Petin, A., Las Cruces, N. M., as health resort, etc, 338
Philadelphia medical and dental schools, etc., 446
Phthisis, of "China" potters, Pate, 86
Aiken, S. C., as a health resort, etc,, W. Davidson Bidwell, 322
tubercular, smoke for, Albertson, 457
internal administration of ozone for, Norris, 543
Phosphorus, turpentine as a hindrance to the toxic action of, Bush, 409
Physicians, not among the millionaires, Post-Graduate, 247
why, should specify, etc. (Ed.), 486
Physiologists, the Second International Congress of, 408
Pill, my, Taylor, 430
Piperazin, therapy of, 717
Pixley, C. S., specific urethritis, 510
Placenta, retained, W. J. Nolan, 274
Plethora and pruritis, W. J. Nolan, 457
Pleurisy, E. S. McKee, 580
Pneumonia, Broncho-. of intestinal origin in children, Jour. of American Med. Assoc., 126
infectious, Revue Generale de Med., 113
patients, refreshing beverage for, Med. and Surg. Reporter, 9
double, Nothnagel, 592
treatment of, E. S. McKee, 582
Poisoning, blood, 711
Polyclinic at the Medico-Chirurgical College, 484
Poliomyelitis, Church, 622
Poison, elimination of toxic agents by free perspiration (Ed.), 574
proprietary medicines containing, 445
Poisoning, carbonic acid, Quinquaid, 208
cyanide of potassium, Wichman, 289
hydrocyanic acid, Kobert, 289
cocaine, Mattison, 428
aconite, Robinson, 465
sub voce "Bite"
of an infant by vapors of carbolic acid, Bouloback, 207
Porro, operation *vs.* Cæsarean section, Price, 227
Post-graduate education, medical profession and, (Ed.), 249
Practitioner's case-book, stray leaves from, W. F. Waugh, 535
Pregnancy, retroversion in, Dixon-Jones, 169
extra-uterine, Fenerly-Bey, 522
Price, tribute to a noble woman, 117
Proprietary medicines, see "Poison," "Quack Remedy"
Prostate, enlarged, a myth, reply by Med. World, 212
Harrison, 278
Prostitution, Blaschko, 86
Pruritus, use of alkalies in, Lange, 113
Puerperal convulsions, six in half an hour, recovery, O. McLeod Smith, 189
Puerperal convulsions, Z. R. Millard, 358
insanity, influence of parturient lesions, etc., in the causation of, Rohe, 232
Puberty and adolescence, females at the time of, etc., Crichton-Browne, 277
Pyosalpinx, aspiration and irrigation in, Nitot, 232

Quack remedy, damages awarded a victim of, 130
Quarantine infectious diseases (ed.), 509
national, (ed.), 586
Queries, G. H. A., 575

Radcliffe, S. J., epistaxis, etiology and therapeutics of, 422
Rectal, ischio-abscess, Henry R. Wharton, 651
obscure, case, 542
Rectum, operation for carcinoma of the, Centralblatt fur Chir., 489
prolapse of the, Manley, 620
Remittent fever, malarial, J. P. Francez, 396
continued, Happel, 593
Renal disorders, wild bilberry in, Med. Press and Circular, 145
Retreating, on graceful, Maryland Med. Jour., 199
Rhea, R. H. G., Jr., impotence, following typhoid fever, 665
Rheumatic fever, J. Bryant, 457
Rheumatism, chronic infantile, Siman, 30
neuralgia, erysipelas, etc., phenocoll hydrochloride in, Brun, 440
acute, F. W. Frankhauser, 459
red bilberry in, Smirnoff, 512
Rheumatoid arthritis, T. Coates, 458
Road improvements, best methods of, 115
Roberts, W. P., health resorts for consumptives, 337
Rodgers, Mark A., a case in cerebral surgery, 75

Saalfield, E., Losophan. 701
Salol, method of administering, Balesʻier, 68
Salpingitis and peritonitis, methods in recurrent, Polk, 227
conservative treatment of, American Jour. of Obstetrics, 231
Salipyrin, Argo, 83
unfavorable results from, Hitschman, 83
Sangree, T. C., the cholera in Antwerp, 576
Ernest B., arsenite of copper in cholera infantum, 59
galvanism in atrophy of the testicles, 133
dry-cell batteries, 110
dry-cell batteries again, 226
reply to Dr. Blackwood, 249
maternal impressions, 225
Sanitation, protective of the working classes, J. J. T., 81
Scarlet fever, relapse, false relapse, and recurrence of, Janseime, 389
a milk epidemic of, 444
Scepticæmia, gonorrhœal, Rugy, 464

Schweinitz, G. E. de, corneal astigmatism, etc., after mydriasis, 558
Sciatica, cascara sagrada in, T. G. Stephens, 76
treated by the faradic current, W. J. Nolan, 382
Science, curious examples of applied, Shield, 56
heroes and martyrs of, Medical Lancet, 238
Scirrhus, faradization of chest-walls after operation for, W. F. Waugh, 267
Sclerosis, arterio, Ross, 65
Sea-sickness, Charteris, 63
Worcester sauce for, 442
Seborrhœa of the hairy scalp, Saalfield, 80
Section, Cæsarean, Foy, 235
Semmelweis, international memorial of, 240
Septic dangers in hypodermic injection, catherization and irrigation of wounds, Frank J. Thornbury, 105
Sex, determination of, of fœtus, Lassier, 85
in education, J. Crichton Browne, 93
Sexton, Luther, intermittent malarial fever, 71
Sexual perverts, etc., Duhouset, 522
Shade, Nevin B., choose a specialty, etc., 8
cholera not necessarily a fatal disease, 196
Sherman, W. N., Southern Rocky Mountains as a health resort, etc., 325
Skin-grafting, some modifications of Thiersch's method of, Watson, 517
Skull, fractures of the, Crile, 391
Smith, O. McLeod, puerperal convulsions, etc., 289
Gould, typhoid fever, 356
catching cold, 587
Somnal, action of, Myers, 497
Sore throat, mercurial, Schuster, 206
Soyal, injections of, for ulcers, etc., 440
Spasms, professional, Benedict, 467
reflex, of the glottis, etc., Lancet, 465
Special numbers, of the TIMES AND REGISTER, 191, 335, 537, 642
suggestions for, A. N. Spurgeon, 643
manifested interest in, Chadman, 339
Specialty degrees (Ed.), 509
Spectacle frames, improvement in, Occidental Med. Times, 70
Spermine, Maier, 416
Sphincter ani, how to dilate the, 647
Spinal abscess, Cheyne, 277
injuries, etc., (Ed.), 222
meningitis, gelsemidum in, Hosp. Gaz., 520
paralysis, electro-diagnosis, Coates, 712
Spitting, crusade against, 445
Spurgeon, A. N., maternal impressions, 714
what they all say, 540
suggestions for special numbers, 643
Stephens, T. G., cascara sagrada in sciatica, 76
epistaxis treated by the "umbrella fashion," 587
Sterility in women, causes of, Mary A. Dixon-Jones, 170
Sterilizer, the only known, 693
Stewart, W. G., headache, 532
Stomach affections with neuralgia, solanine in, Desnas, 155
diseases, Hemme, 515
Story, G. W., eczema with angina pectoris, 575
Strock and Forrest, private correspondence, 274
Strychnine for snake bites (Ed.), 586
Students, special number for, 335
Suicide by means of leeches, Jour. de Med. de Bordeaux, 87
Sulfonal in the cramps of fractured legs, etc., Andrews, 281
in grip, insomnia, etc., Med. and Surg. Record, 344
Sullivan, John L., and his Waterloo, (Ed.), 333
a paralytic, (Ed.), 404
Sulpho-ricinic acid, Renault, 88
Summer complaint of children, Jos. Jones, 1
Christopher, 18
W. F. Waugh, 6
Surgical practice, golden rules in, 487
uses, an absorbent cotton for, Gay, 524
Surgery, three cases of cranial, William H. Morrison, 45
a case in cerebral, Mark A. Rodgers, 75
under hypnotic suggestion, Howard, 144
compatibility of aggressive and conservative, J. McFadden Gaston, 553
progress in, 584
nitrous oxide and ether in minor, Rumboll, 599
orthopedic, proceedings of the section of, in the N. Y. Academy of Med., 594
antiseptic, present position of, 81
antiseptic, decadence of, 102
obstetric, with report of a Porro case, Anna M. Fullerton, 605
pental as an anæsthetic in minor, Hollænder, 440
Suspensory bandage, Parker, 695
Sweating in the profession, Hosp. Gaz., 380
Syphilis among the Assryo-Chaldeans, Buret, 207
mercury in, 487
treatment of, (ed.), 572
Hot Springs Med. Jour., 493
with dog's serum, Cotterell, 621
Syphilitic nervous disease, Edward C. Mann, 421
sores and phagedænic ulceration, styptic colloid with calomel in, Asclepiad, 441
affections of the mouth, chromic acid in, Fribar, 498
Symphysiotomy, report of an operation, B. C. Hurst, 476
Syncope following the local use of cocaine, E. W. Bing, 381
Synovitis of the knee joint, F. T. Field, 405

Tænia in man, Ferand, 386
Tænia, a cause of intercostal neuralgia, and shingles, Dury, 87
Tape-worm, a case of, Holland, 226
Tar, coal, uses of the derivatives of, Murphy, 414
Taylor, my pill, 430
Temperance journals, the dreary reading in, 571
Testicle-extract, injections of, Sgasse, 659
Testicles, enlarged, and rupture, 197
galvanism for atrophy of the, Ernest B. Sangree, 137
Tetanus and cobwebs, La Gazette Med., 87
Theories, medical, past and present, E. W. Bing, 387
Therapie of trional and tetronal, Schæfer, 287
Therapeutics, benzoate of soda in, Liegois, 332
salophen, Josef Frolich, 449
pilocarpine in erysipelas, Beysel, 339
hemorrhoids, 87
psycho-, Robertson, 413
syrup of chloride of iron, Le Med. Moderne, 285

Therapeutics, report of the French commission on cholera, Le Progr. Med., 239
Thornbury, Frank J., septic dangers of hypodermic injections, etc., of wounds, 105
Thyroid gland, functions of the, Sgobbo and Lamari. 591
Canizarro, 592
Titles, justifiable and commendable, 138
Tongue, the coated, Duffeld, 91
Trachelitis, inhalation of menthol in, Barbon and Martin, 403
Trial of Alice Mitchell, (ed.), 273
Trichinosis, Memphis Jour.. 491
Tuberculosis, congress in 1893, Revue Med., 286
transmissibility of, by bed-bugs, Dewees, 285
human and fowl, Parsons, 491
of the stomach, 430
Tuberculous joints, iodoform in. Wyatt, 438
Typhic fevers, sulpho-carbolates in. F. H. Williams, 356
Typhoid fever, D. M. Barkley, 447
immunity against, Bruschettine, 464
soluble products of the microbes of putrefaction in, Chelmonski, 552
two rare cases of, Gerlœzy, 29
special number, (ed.), 138, 404
chloroform in, Werner, 288, 440
E. A. Cobleigh, 345
J. A. de Armand, 351
W. Thornton Parker, 348
Francis L. Haynes, 354
editorial on, 355
Wm. Patch, 707
J. W. King, 705
W. S. Cline, 356, 691
Gould Smith, 356
J. H. Coffman, 358
in Newburyport, Mass., E. P. Hurd, 352
in St. Mary's Hosp., W. J. O'Reilly, 353
phenacetine—Bayer in, Ensign, Quine, Jack, Sommer, Cline, Davidson, Hermann, Waugh, Mayberry, 361
convalescence from, Bouveret, 362
the immunity conferred by, Potain, 363
rational treatment of, Langdon, 377
ascaris lumbricoides in, Reynolds, 432
Wendland on, 440
as related to the Nervous System, Wolfe, 673
the diet in, Waugh, 675
some complications of, Grancher, 678
some thoughts on, Chenery, 682
treatment of, Marcus, 684
editorial, 686
treatment in the Phila. Hospitals, 688
treatment of, Cole, 691
treatment of, Tressider, 692
treatment of, Hall, 710
treatment of, Anderson, 692
treatment of, Werner, 692
tympanites of, Harbin, 706
hydrotherapy in, 716

Ulcers of the leg, Gramshaw, 278
Urethra, stricture of the, G. Frank Lydston, 504
irritation of the, Mary Putnam Jacobi, 601
Urethritis specific, C. S. Pixley, 510
Uric acid diathesis in children, N. Y. Med. Jour., 199
some points in the study of, Denver Med. Times, 256
Urine, lycopodium for continence of, Le Progr. Med., 155
U. S. army, and marine hospital service, official list of the changes in the, 70, 104, 158, 186, 212, 240, 265, 318, 358, 394, 418, 446, 500
Uterus, congenital imperforation of the, Desormeaux, 157
effect of ergot on the involution of the, Herman, 623
extirpation of the, Hochenegg, 229
retroflexion of the, J. F. W., 339
retroversion of the, and cystocele, Boyd, 229
hemostyptica in climacteric bleeding of the, Kish, 412

Vaccination pays, E. C., 571
Vagina, had this man a? Boeckel, 102
Vaseline, an undesirable lubricator, Novotmy, 143
Vertigo, arterio sclerosis as a cause of, Church, 89
Vesical irritability, Jno. A. Bryant, 643
Visceral disease, sensory symptoms in, Mackenzie, 408
Vomiting in animals, arrest of, Sabbatani, 443
of pregnancy, Federow, 467

Walling, W. H., moderate vs. strong currents in electrical applications, 243
a new form of a valuable hematinic, 612
Warren, Chas. Everett, dosimetric materia medica, 245
Water supply from the Thames, Sir Geo. Buchanan, 471
Waugh, William F., a case of herpes zoster, 425
gonorrhœa, 501
stray leaves from a practitioner's case-book, 535
summer complaint, 6
cases of emergency, 78
the Bedford cure, 133, 241
letter from Bedford Springs, 222
faradization of chest-walls after operation for scirrhus, 267
diabetes mellitus, quick recovery, etc., 398
Southern Pines, N. C., as a health resort for consumptives, 329
diet in typhoid fever, 675
Wharton, Henry R., ischio-rectal abscess, 651
Whooping Cough, Patterson, 715
What they all say, A. N. Spurgeon, 540
Wesselowski, bilious malarial fever, 197
Wild, going, Phelps, 514
Williams, F. H., typhic fever, 356
Wilson, cholera infantum, 11
Womanhood, the new, Anna M. Fullerton, 335
Women, medical, in Bosnia, 444
Wolfe, Samuel, belladonna and coffee as antidotes in opium poisoning, 136
the first bath, 223
typhoid fever as related to the nervous system, 673
Wounds, flaming surgical, Felizet, 620
with dynamite, N. Y. Med. Jour , 63
gun-shot, medico-legal advice, Tillotson, 339
penetrating, of the knee-joint, Cuffman, 275

Yawning, therapeutic application of, Med. Record, 199
Naegeli, 467

Ziegler, Lewis, the Philadelphia County Medical Society, 527
Zona, Brocq, 468

The Times and Register.

Vol. XXV. No. 1. PHILADELPHIA, JULY 2, 1892. Whole No. 721.

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PAGE

ORIGINAL ARTICLES:

PRACTICAL OBSERVATIONS ON SUMMER COMPLAINTS, CHOLERA INFANTUM, SUMMER DIARRHŒA OF CHILDREN. By Joseph Jones, M.D., LL.D. - - - - - - - - - - - - - - - - - - - 1

CHOLERA INFANTUM. By F. F. Loughead, M.D. - 4

THE SUMMER COMPLAINT. By William F. Waugh, M.D. - - - - - - - - - - - - - - - - - - - 6

CHOOSE A SPECIALTY AND GIVE THE YOUNG DOCTORS A CHANCE. By Nevin B. Shade, M.D. - - 8

EDITORIAL:

A CHAPTER ON HYGIEME - - - - - - - - - - - 9

ANNOTATION:

Hot Weather Hints - - - - - - - - - - - - - - 11

LETTERS TO THE EDITOR.:

Cholera Infantum. *Wilson* - - - - - - - - - - 11

Calomel for Cholera Infantum. *Colter* - - - - - 11

BOOK NOTICES:

The Railway Officials' Directory - - - - - - - - 12

Annual of the Universal Medical Sciences. *Sajois* 12

The Science and Art of Midwifery. *Lusk* - - - - 12

The Diagnosis of Disease of the Nervous System. *Herter* - - - - - - - - - - - - - - - - - - 12

Varicocele and Its Treatment. *Lydston* - - - - - 12

Cerebral Meningitis. *Barr* - - - - - - - - - - 12

The Scalpel. *Mitchell* - - - - - - - - - - - - 12

The Prescribers' Pharmacopœia. *Kemp & Co.* - - 12

PAGE

THE MEDICAL DIGEST:

A Refreshing Beverage (*Formulaire de la Fac. de Méd. de Vienne*)—Cholera Infantum—Abstract from the *Medical World's* Special Cholera Infantum Number—For Summer Diarrhœa (*Bartine*)—Treatment of Green Diarrhœa (*Hayem*)—Treatment of Summer Diarrhœa in Children (*Ross*)—Insomnia of Summer Diarrhœa (*Edson*)—The Treatment of Infantile Diarrhœa of Warm Countries (*Roux*)—Sulpho-Carbolate of Zinc (*McCall*)—Salicylate of Bismuth in Infantile Diarrhœa (*Mikhnevitch*)—Ileo Colitis (*Van Goidstnoven*)—The Treatment of Hill Diarrhœa (*Combie*)—Acute Dyspeptic Diarrhœa (*Osler's Practice*)—Symptomatology and Treatment of Summer Complaint (*Christopher*)—Artificial Foods (*Machell*)—Boiled Milk (*Literary Digest*)—Opium in Acute Digestive Disturbances of Children (*Med. and Surg. Reporter*)—A Strange Case of Epilepsy (*Weekly Med. Review*) - - - - - - - - - 8, 12-28

THERAPEUTIC NOTES. *Bing*—Extirpation of a Tuberculous Kidney (*Baginsky*)—Resection of the Peripheral End of Nerves in the Treatment of Certain Neuralgias (*Pollosson*)—Hyper Secretion of the Cephalo Spinal Fluid as a Cause of the Symptoms which Supervene After Operations on the Nervous Centers (*Pollosson*)—Two Rare Cases of Typhoid Fever (*Gerlœzy*—Antiseptic Treatment of Burns (*Maylard*)—Treatment of Chronic Infantile Rheumatism (*Simon*)—Anti-Constipation Pills (*Huchard*) - - - - - - - - - - - - - - - 28-30

MEDICAL NEWS AND MISCELLANY - - - - 30

NOTES AND ITEMS - - - - - - - - - - - - iv, x

Original Articles.

PRACTICAL OBSERVATIONS ON SUMMER COMPLAINTS, CHOLERA INFANTUM, SUMMER DIARRHŒA OF CHILDREN, GASTRO-ENTERITIS OF CHILDREN.

By JOSEPH JONES, M.D., LL.D.,

NEW ORLEANS, LOUISIANA.

Professor of Chemistry and Clinical Medicine, Tulane University; Visiting Physician of Charity Hospital.

NEW ORLEANS, June 19th, 1892.

To the Editor of the Times and Register, Philadelphia, Pa.

DEAR DOCTOR:—I have the honor to acknowledge the following:

"PHILADELPHIA, JUNE 14th, 1892.

"DEAR DOCTOR:—I have under way a special number, devoted to 'The Summer Complaint,' and would be very glad to have a paper from you on the subject. Any time within two weeks will do. The specials are given an extra circulation, and are wonderfully successful.

"Truly yours,

"W. F. WAUGH."

Allow me to say that circumstances are such at present, that I can give you but a few practical suggestions on this important subject.

Respectfully yours, JOSEPH JONES, M.D.

CHOLERA INFANTUM is said to destroy annually about 40,000 infants in the United States, and this little army of innocents passes over the river, leaving but slight traces of their brief existence, except in the hearts of their mothers and fathers. This disease stands sixth on the list of fatal diseases, and is largely instrumental in producing the deaths of one-half of the human race, between the ages of birth and five years of age.

What must the amount of suffering and expense be to the country at large, for the care and treatment of the vast number of children suffering with bowel affections; how important should the study of this disease be to the philanthropist, as well as to the scientific and practical physician.

In the short space of time now at my command, I can do no more than present the following brief practical observations.

I. CAUSES OF CHOLERA INFANTUM.

(*a*) Dentition.
(*b*) Elevated temperature.
(*c*) Crowding and the crowd poison of large cities; bad ventilation, especially in tenement houses; the exhalations of gutters and sewers and privies, especially during the hot months of summer.
(*d*) Impure milk, whether derived from sickly ill-fed mothers, or from imperfectly fed and diseased cows; or from metallic cans.
(*e*) Ptomaines engendered in fermenting milk.
(*f*) Specific micro-organisms.

DENTITION AS A CAUSE OF CHOLERA INFANTUM.

In the teething child, the teeth press upon and irritate the extremities of the dental nerves, and the irritation is transmitted by those nerves to the ganglionic cells of the cerebro-spinal nervous system, and from thence to the sympathetic ganglia.

As a result of this irritation and reflection of the irritation to the gastro-nervous membrane, there is induced—

(*a*) An enfeebled and excited condition of the central ganglionic cells of the cerebro-spinal nervous system, often resulting in irritation and inflammation of the meninges of the brain, hydrocephalus, convulsions and death. The truth of this proposition is sustained by the frequency and fatality of convulsions amongst teething children. We are all familiar with the restlessness, the tossing of the head from side to side, the dilatation or contraction of the pupils, and the firm contraction of the fingers, and especially of the thumb, which in many cases of cholera morbus precede convulsions and death.

The irritation of the ganglionic centers in the teething child, leads to impairment of digestion, loss of tone and power in the alimentary canal, irritation of the gastro-intestinal mucous membrane.

The impaired functions of the stomach and bowels in the teething child, are indicated by profuse watery serous, often light colored and highly offensive discharges, often mixed with masses of undigested, fermenting and putrid milk.

Both the liver and kidneys are frequently involved in cholera infantum, and owing to the reflection of the irritation, or excitement to the kidneys, the urine sometimes contains grape sugar. In many cases, the functions of the liver are involved to such an extent as to lead to the disappearance of the coloring matters of the bile in the intestinal discharges.

ELEVATED TEMPERATURE AS A CAUSE OF CHOLERA INFANTUM.

The cases of cholera infantum occur chiefly during a period of ninety days, embracing the months of July, August and September. The first five or ten continuous days of elevated summer heat are generally attended in the large American cities, as Boston, New York and Chicago are attended, with the development and spread of this disease. The effects of elevated temperature are fourfold.

(*a*) Depression of muscular and nervous forces, leading to debility and perversion of the functions, and especially of digestion and nutrition. The effects of elevated temperature are mostly severe upon these, or teething children who have already been debilitated by gastro-intestinal irritation and profuse serous discharges. Every infant and child is, more or less, affected and debilitated at all seasons of the year by the process of dentition; hence the protracted heat of summer is most severely felt by this class of the human race.

If the strong, robust men and women suffer intensely in our large cities from the elevated temperature of summer, and often fall victims to sunstroke and other conditions resulting from elevated temperature, how much more potent must elevated temperature be in effects upon infants and children already debilitated and deranged by the process of dentition.

(*b*) The increase of fermentation and putrefaction in the sewers, gutters, drains and privies, and in the refuse matters, garbage, etc., and in the urine and excrements of animals saturating the streets.

Increased fermentation and putrefaction during the action of elevated temperature in crowded cities and tenement houses, is necessarily attended by the increased developments of noxious gases, such as carbonic acid, carburetted hydrogen and sulphuretted hydrogen, and by morbific micro-organisms.

In hot weather in cities all are, more or less, affected by these morbific agents; but these deleterious effects are especially exerted upon the debilitated systems of teething children.

(*c*) The increased fermentation and putrefaction of milk, and of all forms of animal food during high temperature. The change of milk is especially rapid when administered unboiled in unwashed or carelessly cleansed bottles or vessels.

(*d*) The debilitating effects of prolonged elevated temperature upon mothers, wet nurses, and cows furnishing milk to teething children.

The effects of elevated temperature in depressing the nervous and muscular forces, and in deranging the secretions, are felt, to a certain extent, by mothers and wet-nurses, leading to an alteration and diminution of the quantity and quality of the milk.

CHOLERA INFANTUM CAUSED BY CROWDING.

The crowd poison, bad ventilation, the noxious exhalations of sewers, gutters and privies, and the stagnation of the air during periods of protracted heat in cities.

CHOLERA INFANTUM CAUSED BY IMPURE MILK,

whether derived from sickly ill-fed mothers, wet-nurses, or from cows.

CHOLERA INFANTUM CAUSED BY PTOMAINES

engendered in fermenting or putrefying milk during the increased heat of summer.

Canned milk may also be a source of much evil, from the development of poisonous products.

Carelessness in the cleansing of bottles and vessels used in feeding children may be the source of much harm, and lead to the development of mucus poisonous products capable of deranging the digestion and the intestinal canal of teething children.

CHOLERA MORBUS CAUSED BY A SPECIFIC MICRO-ORGANISM,

or by a number of toxic micro-organisms capable of inducing fever, gastro-intestinal derangement, convulsions and death.

This important subject is worthy of the most protracted and careful investigation, and the United States should not limit its efforts and investigations to yellow fever, an exotic and, to a large extent, a preventable disease; but should appoint and support a commission of learned and accomplished practical microscopists, sanitarians and physicians for the investigation of this destructive, wide spread and annually recurring disease

Like yellow fever, cholera infantum in its origin and spread is largely dependent on elevated temperature.

SOME PRACTICAL OBSERVATIONS ON THE TREATMENT OF CHOLERA INFANTUM.

(*a*) Change of air from the crowded city and ill ventilated houses to the cool and pure air of the sea-coast, or elevated mountainous region, or the more sparsely settled districts of the country.

Of course, such changes in the surroundings of teething children are only practicable in the cases of those possessed of the necessary means and endowed with the necessary humanity.

I would suggest and urge that sanitariums for teething children should be established along the sea-shore, in rural districts, and elevated regions, accessible to all classes, and supplied with all the necessary requisites of medical treatment and wholesome food. The benevolent, endowed with ample means, could never do a greater or nobler work than the formation of sanitariums or retreats for teething children.

(*b*) The milk of the healthy mother, or wet nurse, will, to a large extent, ward off and mitigate the effects of cholera infantum.

When cow's milk is used it should be obtained from one healthy cow; it should be carefully boiled.

The bottles or bowls containing the milk should be kept at all times scrupulously clean by boiling after each use in feeding the child. The structure and arrangement of the nipple is also important.

A small quantity of lime water (liquor calcis) added to the milk will prove beneficial in neutralizing the acid conditions of the stomach, and in aiding as a germicide, and in furnishing an important element of the teeth and bones in the teething child.

(*c*) Properly prepared beef tea from fresh, tender, raw beef, to which a few drops of hydrochloric acid have been added, may, in many cases, be substituted with benefit for milk.

Duecro's Alimentary Elixir of the French is in high favor with some practitioners, and appears to be beneficial; not merely

from the salts of beef but also from the presence of good brandy.

(*d*) Small doses of calomel or of hydrargyrum cum creta are often of marked benefit when judiciously used in the treatment of cholera infantum.

(*e*) The excessive discharges from the bowels may often be combated by the judicious use of the subnitrate of bismuth and precipitated carbonate of lime, as in the following :

℞.—Camphorated tincture of opium (paregoric) ..... f℥ij
Tincture of rhubarb..... ♏xx
Tincture of asafœtida..... f℥ij
Tincture of catechu,
Tincture of kino .....āā f℥iv
Precipitated carbonate of lime.... ℥iv
Peppermint water..... f℥i
Water sufficient to make in all.... f℥viij

Sig. Shake well. Dose, one or two teaspoonfuls every two, three or four hours, as necessary.

(*f*) Digestion may be promoted, and the strength maintained by the following combination of pepsine and the phosphate of lime and tartaric phosphate of iron :

℞.—Pepsine,
Phosphate of lime,
Tartaric phosphate of iron.....āā ℥iv

M.—Sig. Administer from five to ten grains of this mixture, in a little syrup, three times a day, after meals.

This mixture should be carefully preserved in well stopped bottles. One drop of tincture of nux vomica administered three times a day, properly diluted, will prove beneficial in some cases. So also quinine, judiciously used internally, in from one to two grains three times a day, will prove beneficial in many cases of cholera infantum.

Sulphate of quinine may also be employed externally with benefit, in the following liniment :

℞.—Quinine sulph..... ℥i
Soap liniment
Olive oil .....āā f℥ij

M. Rub the body and joints of the arms and legs and feet of the child, two to four times a day.

The effects of this liniment will be, in a measure, to reduce the temperature. In concluding this brief outline we would lay stress upon the necessity of furnishing the little cholera infantum patients with abundant and continuous supplies of fresh air and cool fresh water.

CHOLERA INFANTUM.

By F. F. LOUGHEAD, M.D.

CHOLERA infantum, or summer complaint, the most severe and dangerous form of the gastro-intestinal diseases which are prevalent among children during the summer months, is characterized by very frequent stools, at first having a very offensive odor, and being semi-solid, but which latterly become fluid, losing their color and odor, and only slightly staining the child's napkin ; frequent and persistent vomiting, accompanied by more or less retching, and containing sometimes bile and sometimes only the water which the patient has taken ; high temperature, attaining 105° or more ; higher by 2° or 3° in the rectum than in the axilla ; total loss of appetite, and intense thirst ; scanty urine, and emaciation and weakness most pronounced. The eyes are sunken, and the fontanelles depressed ; the face and extremities are cool, and the respiration more rapid. There is marked abdominal tenderness.

Toward the end of the disease, if fatal, convulsions and cerebral symptoms are quite prominent.

Causes.—The causes which lead to these conditions are :

1. Decaying animal and vegetable matter.
2. Bad drainage and sewage.
3. Impure drinking water and milk.
4. Poor hygienic surroundings.
5. Crowded tenements and imperfect ventilation.
6. Improper food and feeding.

It is a well established fact that in large cities and towns where the above conditions exist, there does this disease find its victims, whereas in the country the disease is almost unknown, and when it is present its origin can be readily traced.

Treatment.—The treatment resolves itself into the preventive and the curative, but the most important is the first.

As the gastro intestinal symptoms are the most prominent, a thorough understanding of the digestive functions, as well as the quantity and quality of food, and times of feeding, are necessary. The food is digested by various secretions, which in the infant are very limited in their capabilities.

Ptyalin, the ferment of the salivary glands, is alkaline in reaction, and converts starch into glucose.

The gastric juice is acid in reaction, and through its active principle, pepsin, converts the proteids into peptone, having no action on starch, grape sugar, or fats, excepting to dissolve the membranes of the fat cells.

The bile is alkaline and slightly emulsifies fats.

The pancreatic juice is alkaline ; it converts starch into sugar, proteids into peptones, emulsifies fats, and is the most important.

Remembering the rudimentary state of the glands, and the limited power and action of their secretions, the necessity for the proper food and feeding of the infant is manifest. If these be properly attended to, a majority of these cases can be prevented, and if the disease attacks the child, it can be more successfully combated.

As the mother's milk is the only true and perfect food for the infant, and the artificial foods on the market are but poor substitutes, artificial feeding should never be resorted to, excepting in cases of absolute necessity, and then we must aim to supply something which will approximate as nearly as possible that which we are obliged to forego. That which is most nearly allied to human milk is animal milk. The mother's milk is alkaline in health—the cow's is acid. The gastric juice coming into contact with the casein of the natural food, causes it to coagulate in small flakes, while the casein of the cow's milk is coagulated in large masses, thereby sometimes producing gastro-intestinal disturbance. To overcome this great difference between the human and animal milk, we must act upon casein of the cow's milk, so that it will curdle as nearly like that of the mother's as possible. This may be accomplished to a satisfying degree by pre-digesting the milk, which is done as follows :

Take

Extract Pancreatis	gr. v.
Sodii Bicarb.....	gr. x.

and dissove in one gill of warm water, after which add one pint of warm milk ; put this in a bottle, and place in water kept at 100° Fahr. for one hour. Taste frequently, and if there be the slightest bitter taste, remove and place on ice, to prevent further action ; for if digestion go too far, the child will reject it on account of the bitter taste. The milk must be perfectly pure and fresh, vessels absolutely clean, and water boiled before using. This, as well as other artificial foods, must be prepared fresh and in small quantities. As the child's stomach is very small, one under four weeks of age should never be fed more than an ounce at a time, or oftener than every two hours ; above this age, the quantity is to be increased gradually, as are also the intervals between feeding. In the last few years, I have used peptonized milk to the exclusion of other foods, and with more uniform success. Of the artificial foods, those which are prepared according to the Liebig formula are the best.

Gruels may also be employed to advantage.

If possible, remove the child from its bad surroundings ; if this cannot be done, keep it in the open air during the morning and evening hours as much as possible.

Dress it lightly, with a flannel bandage around the abdomen ; protect it from sudden changes in temperature ; and feed it neither too much nor too often. Bathe it regularly daily, in a bath of about 98°, and allow the water to cool to about 90°, or even 85°. Should these measures be insufficient to ward off the disease, other means are at our disposal ; but now we must cure and not prevent.

What I have said, regarding the care of the child, still obtains, but we must call in other agents to assist.

For the intense thirst, give lime-water and milk, brandy, ice, water.

For vomiting and diarrhœa, lactopeptine, bismuthi subnit., mist. cretæ, pulv. cretæ comp. cum opio. Enemata may be given with good results ; starch water, with laudanum ; argent. nitrat., with mucilage.

Flushing the bowels with luke-warm water often removes irritating matter in them.

For the nervous symptoms, bromide of potash may be given.

Opiates should be administered with caution.

Sulpho-carbolate of zinc, in combination with bismuth, is very efficacious.

As to the use of calomel, corrosive sublimate, and arsenite of copper, I do not consider their use judicious.

WOODBURN AVENUE, CINCINNATI, OHIO.

THE SUMMER COMPLAINT.

By WILLIAM F. WAUGH, M.D.

ZINC sulphocarbolate is a salt remarkably free from irritant properties. A pure article is so little like the other zinc salts in this respect, that I have often taken a five grain pill as a lozenge; while in typhoid fever my patients have often taken sixty grains per day, without any unpleasant effects. During the summer the patients are warned that they must notify me whenever the stomach or bowels show signs of disturbance. When the stools become offensive, or the breath sour, the child is at once given a few doses of alkaline syrup of rhubarb, the following being a favorite formula:

℞.—Syr. rhei aromat..... f℥xij
Syr. ipecacuanhæ..... f℥j
Potass. carbonat..... ℥ss
Tinct. hydrastis..... f℥jss
Tinct. castorei..... f℥j
M.—S. f℥ss to ℥j every two to four hours for a child under two years of age.

This is followed by the sulphocarbolate, which I am now using in the form of dosimetric granules, 1/6 grain each. One of these is taken every half hour, or oftener, until the stools have lost their odor, or the sour fermentation has ceased. If the symptoms are more decided, the dose is increased. Let a mother once learn the use of this drug, and the chances for the development of cholera infantum in her infants are reduced to a minimum.

When vomiting commences, the stomach should be cleansed out by draughts of warm water. This will remove any morbid contents, and often the vomiting will then cease; especially, if food and drink be withheld for some hours. If the bowels be not freely open, calomel should be administered in doses of $\frac{1}{10}$ grain every hour; with this, the sulphocarbolate, in the following formula:

℞.—Hydrargyri chlorid. mitis..... gr. j
Zinci sulphocarbolat..... gr. v
Bismuth subnitrat..... gr. xx
Testæ preparat..... gr. x
M. et in chart. No. x, divide.
S. One every hour.

Irritability of the stomach is often relieved by counter-irritants, such as a sinapism, or a spice-bag, to the epigastrium. A warm bath also helps to tranquillize the child. But, whatever else is done, the mycotic operations carried on in the stomach must be stopped, the irritability of the organ soothed, and it should be put at rest, as far as possible, for several hours at least. The child can do without food for that time; the thirst relieved by the bath, by aqueous enemas, small pellets of ice, or, better, by hot water in teaspoonful doses. Resist the demand for cold drinks, and reduce the fever by baths, and the stomach will soon regain its functional activity.

Diarrhœa is less to be feared than the vomiting. If it be moderate, the foregoing treatment will suffice. If it be severe enough to weaken the child, the bismuth should be increased, and the zinc given in in hot water enemas, 5 to 10 grains in 2 to 4 ounces. If the symptoms assume the aspect of dysentery, the enema should be changed to nitrate of silver, ½ grain to 4 ounces. This is a very effectual means of treating severe forms. If there be much pain and straining, an enema of hot water with bismuth suspended is useful, and morphine may also be given in small doses.

For true cholera infantum, more energetic measures are required. If there be fever, this should be reduced by baths and by ice to the head. But fever and choleraic symptoms are alike due to the gastro-intestinal mycosis, and this calls for the sulphocarbolate, in doses of 1 grain every half hour until improvement begins. It is best to give it in powder with bismuth. Sometimes instead of fever there is apyrexia, indicative of collapse from failure of the vital forces. Here the indication is for camphor, alcohol, and, best of all, coffee. Camphor, the monobromide, gr. 1/6 every hour; alcohol in the form of bovinine, 5 drops every ten minutes; hot coffee, 10 drops every ten minutes, are the best forms for administration. In all degrees of the summer complaint, bovinine and coffee are the best stimulants.

When diarrhœa, with gastro intestinal irritability, remain after the worst of the attack is over, the arsenite of copper is very useful, acting as an astringent, a tonic, and relieving the irritation. I am sorry to say that in the early part of the attack, this drug has not proved beneficial. Salol has also disappointed me, its action being far inferior to that of the zinc. The latter *must be pure*, to give good results. That of Powers & Weightman has always proved irritating in my hands, and whenever I have had any undue irritation from it, I have found that the salt came from this firm.

In some cases the diarrhœa continues from weakness, and the child seems too depressed for the reparative process to be established. Tonics are then required, such as brucine, quinine wine, and iron. A chalybeate water will sometimes be well-borne, when the druggists' martial resources fail. In the case of delicate children, such a water is a valuable prophylactic.

What of the diet? Dr. Christopher has recently discussed this question from his standpoint as a physiological chemist, and that so admirably that I will refer my readers to his paper, reproduced on another page. When albuminous food is required, we can choose between raw beef, raw white of an egg, milk with rennet (junket) and whey. Beef tea is apt to open the bowels; if used at all, it should be rendered nutritious by the addition of powdered beef. But if albumen be forbidden, as Christopher declares, we must fall back on one of the other dietary principles. Carbohydrates may be given in the form of arrow-root, rice, barley-water, tapioca, boiled flour-ball, sago or corn-starch. The best of all is zwieback, scalded with boiling water. This article is prepared by the Vienna bakery, and by Angers; but by far the best is to be found at a little shop on Franklin street near Wood, kept by an aged German named Prader. The zwieback must be kept in a tightly-closed tin box, or it will soon become musty. When it begins to soften, it should not be used. Each piece should be heated in the oven just before it is given to the child. Malt is a valuable food for infants in summer, and has the added merit of being cheap. Malt may be obtained of the brewers; the grains should be beaten in a mortar and the bran removed by a sieve. The flour may then be prepared as wheat flour or the ordinary starches.

But if we stop the albumen on account of fetid stools and ptomaine formation, and the carbohydrates on account of sourness from lactic acid fermentation, we need not reduce the baby to actual starvation either. We still have the oils and the fruits. Whether a child could take and retain fresh melted butter, cream, cod-liver oil emulsion, or almond oil, I am not prepared to say, only that children while in good health, will assimilate more oleaginous matter than adults. But their skins can, and often do, take up notable quantities of lanoline or other animal oils, especially if rubbed in while hot. The benefit of this procedure is in direct proportion to the exhaustion of the child. It is an expedient that is not to be neglected; especially as it assists in enabling us to give the digestive organs a rest.

As to fruits. Have we not all heard of the mother who fed her sick child with peaches, and saved it from summer complaint and a doctor who persisted in feeding it on a mistaken theory? Such cases do occur, and are not to be accounted for altogether on the theory of special providential dispensations. The pure fruit juices, freshly pressed from sound, ripe fruit, deserve a place in the diet of summer complaint. The bad name given to fruit has been mainly from the use of unripe or spoiled specimens. Fruit is also employed by many as a laxative food. A little investigation will show that fruit will assist in regulating the bowels, by producing natural, healthy evacuations; but by increasing the dose, purgation is not produced. It is not, then, a cathartic, but a stimulant of the normal intestinal secretions; and as such is not contra-indicated in summer complaint. Grape-juice is perhaps the best and most easily obtained. The grapes should be carefully selected, perfectly ripe, but not over-ripe; they should be clean, and the expressed juice should be given in teaspoonful doses, increasing as it is well borne, to larger quantities. The juice of blackberries, peaches, pineapples, oranges, shaddocks, etc., may be similarly employed. These fruits need not be given raw, but when well stewed, the juices can be freely administered.

But what are all these things worth, if the hygiene of the child's home be not first made right? The most elaborate care, the most scientific medication, are of little avail if every breath of air that enters the child's room be laden with the poisonous effluvia from a filthy alley, gutter or cess pool; if pestilential vapors rise from a forgotten muck-heap in the cellar, or sewer-gas is allowed to penetrate to the house by "jerry" plumbing.

Dr. W. C. Abbott's dosimetric granules have been used by several members of our staff. The granules have proved reliable in every respect; uniform, well made, and of full strength. The system is popular with patients.

CHOOSE A SPECIALTY AND GIVE THE YOUNG DOCTORS A CHANCE.

By NEVIN B. SHADE, M.D.,
PHILADELPHIA, PA.

EVERY physician who arrives at the age of, say, from thirty-five to forty should be able to choose a specialty and limit himself to said specialty, except in cases when he is desired in consultation. This would be a great epoch in medicine, and the dawning of a new era in the medical world, which would bring about greater harmony and lead us out into unexplored fields of medical science. We should be abreast of the present age. The age of steam and electricity has far surpassed the science of medicine. It should not be so. Where are our forefathers? They have passed from the stage of action and left behind them deeds of honor, paths of pleasantness to walk in, in following our worthy calling. But do we imitate them in progressiveness, wideness of intellect, aggressive in thought and research? Have we not brains as well as they? (I say this with all due respect.) Did they not intend that we should take their achievements by the forelock and go on and possess greater knowledge, achieve greater success in the pathology of disease and application of remedies. Are we catering to the wants and demands of suffering humanity? Certainly, we are advancing, but still too slowly. Too much time is being occupied in discussing etiquette, and jealousy and envy run riot throughout the profession.

If all the physicians above thirty-five or forty years of age were limited to a specialty (except when called in consultation), there would not be so much fear of losing a family, because the physician called in consultation is a specialist and would not take routine or general practice. This would be a safeguard to the family physician.

Then again, there would be no occasion for the physician called in consultation to say or to do something unprofessional to prejudice the family against their physician.

It seems so strange that so many physicians seem to want the "whole earth," and the young M.D. must be satisfied with what falls from his neighbor's table.

This condition of things fosters narrowness, selfishness and a constant fight for "bread and butter" on the part of at least ninety per cent. of our noble profession. The signs of the times, the progressive age in which we live, calls for an advance step in many respects. We must get out of the ruts that keep so many in each other's footsteps with contentment, and hinder a bold aggressive spirit in our ranks, trusting without our own research, thought or judgment in others, regardless of the fact that it is "human to err," and a great blunder to follow others, only in the principles of medicine and surgery as far as our own experience and judgment will endorse. We should not fear to be original in thought and fearless in expressing our views which are corroborated by our own knowledge and experience. When this is done in an honest effort, good is always bound to follow.

Unless something is done soon, printers' ink will lead still more aggressive men out of our ranks into a field that assures success to the man who has "snap and get-up," and where his "bread and butter" is assured. I verily believe some are driven from the ranks into quackery, because they have been snubbed and a cold shoulder turned them.

But, if the physicians under forty did the general routine practice, and those at forty and upwards did the special work and consultations, it would be a great stride toward harmony and general satisfaction, which would encourage an aggressive spirit, as well as keep the wolf from the door of the humblest "Doctorem in arte medendi." Will all who favor my suggestions drop a card to that effect to the editor of THE TIMES AND REGISTER? Let us hear from you if you have any suggestions to make.

1314 ARCH STREET.

A REFRESHING BEVERAGE. — Bamberger (*Formulaire de la Fac. de Méd. de Vienne*) suggests the following potion to quench the thirst of pneumonia patients:

℞.—Acidi phosphorici..... 8 grams. (℥ij).
Syrup rubi idæi..... 90 grams. (℥iij).
M.—Sig. To be taken in water.

℞.—Potassii bitartratis..... 8 grams. (℥ij).
Syrupi rubi idæi ..... 40 grams. (℥x).
Aquæ.....400 grams. (℥xiiss)
M.—Sig. Use as a refreshing drink.

—*Le Progrès Médical*, February 6, 1892, p. 109.—*Med. and Surg. Reporter.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

WM. F. WAUGH, A.M , M.D., Managing Editor.

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A CHAPTER ON HYGIENE.

OUR text to-day is hygiene. An old story, a very trite one, concerning which all that can be said has already been said, times innumerable. But how many persons really understand the subject? Very, very few. Doctors speak glibly of "good hygiene," as they do of "light, farinaceous diet," attaching as little real significance to the words in one case as the other. It is a pity that some one does not rise up to assail the principles of hygiene, as the anti vaccinationists berate Jenner; for agitation begets knowledge, and by discussing hygienic subjects they are removed from the realm of the abstract. The greatest good that an enlightened board of education could accomplish would be the introduction of the study of hygiene in the schools, rendered practical by personal inspection of the school buildings, houses, courts, alleys, gutters, cesspools, and yards of the neighborhood.

After six months' experience at sanitary inspecting, the writer is prepared to say that this study might well begin with the medical profession. Not one doctor in fifty makes out properly a report of contagious disease. The law commands that the report shall be made out as soon as the diagnosis has been determined. According to the records of the health office, some of our city physicians have a death rate of 100 per cent. in all contagious affections, and they are incapable of making a diagnosis until after the death of the patient. Many report their cases only after they have recovered, and when the inspector pays his visit he finds that the children have been attending public places, especially Sunday-schools, during the whole period of their relatives' illness. Scarcely a day passes when among the reports there is not one or more in which the doctor has given the wrong address, and the inspector takes a long journey to find the location given in an empty lot, a grave-yard, or a school-house. Out of all the physicians in Philadelphia practising south of Vine street, only three have ever been known to fill in the indorsements on the back of the report; while as to the ward, not one-half give it, although this is a matter of importance, as there may be several streets bearing the same name, and without the number of the ward one has to guess by the doctor's address in what part of the city his patient is most likely to reside, or lose some days in corresponding with the delinquent. Occasionally, when an obscure street is given, the doctor takes the trouble to locate it, as between streets that are better known. We never note this little attention without feeling that we would like to become acquainted with the gentleman who so kindly thinks of the difficulties of a stranger.

One line in the official report asks if the sanitary condition of the house requires an official visit. Scarcely any one ever takes the trouble to answer this question intelligently. In one case the physician stated that no visit was needed, but an investigation showed a child dead with diphtheria, no isolation, the other five children attending the public schools; the cellar so wet as to be almost unfit for use;

the walls so damp that no paper would adhere to them, and the privy full to the level of the seat, and leaking into the alley. Such cases, perhaps not so extreme, occur every day, so frequently, indeed, that the inspector is compelled to disregard this part of the report and visit every case.

We once excused these little derelictions on the ground that the hard-worked doctor, whose mind is fully occupied with the momentous questions of life and death, should not be held to strict account for these lapses; as when he forgets to give his patient's name or address, or his own, or the disease, or locates Johnny Green in 452 S. Front street, when he means Jimmy Brown at 352 N. Second street, etc.; but we have also noticed that the busiest doctors are those who are most accurate in their reports. There is one, who has reported more cases than any other, who *always* endorses his reports, *always* gives the correct name and address, *always* gives his nurses careful instruction in disinfection and isolation, *always* forbids the other children attending school, and *always* gives a report on the condition of the house that is verified by the official visit. In a word, he takes time to do this official work in a faultless manner; and yet he is said to have the largest practice in Southern Philadelphia.

It is not the press of business that interferes with the proper reporting of contagious diseases, but carelessness; the slovenly habit that many doctors display about their business affairs.

During the past six months the writer has visited about 2,000 cases of scarlatina, diphtheria and typhoid fever. These have been attended by doctors good, bad and indifferent; the treatment has, assuredly, been varied in the extreme. Great care has been taken to note the special circumstances that determine malignancy or fatality, and the conclusion reached is that in 95 per cent. of the cases their severity depends upon the hygienic condition of the house and its surroundings. Given a malignant case, and there will be found a wet cellar, an over-filled cesspool, heaps of filth in cellar, yard, or alley, a cesspool leaking into the cellar, paving broken into holes that cannot be kept clean, or some other equally obvious nuisance. Many of the alleys are paved with brick, laid down on the clay. These are soon trampled down into holes where the dirt settles; and they cannot be kept clean without constant work. If people only knew the comfort of a well-cemented alley, and the ease with which it can be kept clean, they would not put up with anything else.

In several cases the cause of malignancy was obscure until the floor of the back kitchen was examined, and under this was found a bed of black, foul-smelling matter.

During the winter and spring the alleys were the most fruitful sources of trouble, but with the advent of hot weather the gutters have attained a malodorous distinction. In many of the smaller streets the gutters are filled with a green, stagnant mass, fermenting under the broiling sun. Little children wade in these foul places, and stir up the black mud at the bottom. Diphtheria appears to be especially connected with this condition of the alleys and gutters.

The remedy for these must be found by the people themselves. It is of little use for the Board of Health to clean out an alley, when in a week it will be as foul as ever. An alley once reported as filthy should be inspected regularly thereafter, and every householder allowing his portion to be dirty should be notified and fined. The gutters should be flushed and swept down every day. It is folly to depend on the authorities, who can only move slowly and with due respect to the legal limitations, for the children may die while the red tape is being unwound. If the inlets are choked and paving broken, use all proper means to have them put in order, but do not wait for this to be done. If each intelligent citizen were to put his own premises in order and see that his neighbor did the same, the death rate of the city would drop, and the parents of little babes could look with equanimity on the approach of the dog-days.

For there can be no shadow of a doubt that these unhygienic conditions that determine malignancy in the infectious diseases are also the causes of mortality from the summer complaint. Heat has its influence, and yet little children withstand the effects of excessive heat as well, or better, than adults. Improper food has much to do with the production of summer diarrhœas, yet the human stomach, even of babes, is marvelous in its power of dealing with noxious ingesta. But, given the blazing heat of summer, arousing to life all sorts of microscopic races, with beds of filth in which they can develop into malignancy, and food in that stage of decomposition that renders it the fittest vehicle for conveying virulent infusoria to the child's digestive organs, and also of inducing such morbid action there as will lessen the child's power to resist these morbific influences, and you have there the whole etiology of the summer complaint.

Annotation.

HOT WEATHER HINTS.

MUCH of the intestinal trouble prevailing during the summer is to be attributed to the excessive use of fluids, especially when iced. It is so natural to run to the water-cooler as soon as one rises, and to wash down the breakfast with copious draughts of iced tea or milk. By the time one is half way to his office he is drenched with perspiration and ready to imbibe anything drinkable. The day is spent in swilling soda-water, ice-cream and similar trash, that destroy the appetite and weaken the sufferer by the profuse perspiration that drains away his salt. The consequence is an acute indigestion, or "bilious attack," or perhaps heat exhaustion, so often mistaken for sunstroke. The way to be comfortable in hot weather is to be very sparing in the use of fluids, relieving thirst by resisting it, when, like the devil, it will flee from you.

For the little ones, clothe them in a single garment that can easily be slipped off, and place a large tub of water in the middle of the nursery. Then go away, and they will do the rest.

Letters to the Editor.

CHOLERA INFANTUM.

AT your request I send you the following notes on cholera infantum. As the symptoms of this disease are so well known to the profession generally, I will have nothing to say in regard to them, and as the etiology is so obscure, it will be useless for me to explain it further than to say that I think the hot weather is the determining cause. As to treatment, there is a host of drugs recommended, among them being calomel, bismuth, arsenite copper, opium and ipecac. I regard minute doses of calomel and ipecac every ten or fifteen minutes a very efficient remedy in this disease. Bismuth subnitrate also has proven of value. Arsenite of copper has been a complete failure in my hands, while some of my neighboring physicians report good results from it. Chloranodyne (P. D. & Co.) in one-drop doses every fifteen minutes until vomiting is relieved, is one of the most valuable remedies that I have used for young children. Dr. R. A. McLean recommends the following prescription:

℞.—Tr. veratri vir..... gtt. iv
Aquæ..... ℥ij
Sig. Teaspoonful to a child one year old every ten minutes.

I have only used the remedy in two cases, both of which recovered. I would be glad if some of the brethren would give it a trial and report the results. Salol is a remedy that I have had no personal experience with, but good results seem to follow its use in other hands, and I expect to give it a trial the first opportunity. Opium I regard as unsafe, and rarely ever use it with children under one year old. When the hydrocephaloid stage is reached, the following prescription of Dr. J. Lewis Smith's seems to be of value:

℞.—Tr. columbæ..... ℥ij
Liq. ferri nitratis..... gtt. xviij
Syrupi..... ℥ij
M.—Sig. Teaspoonful at a dose.

Last, but not least, strict attention must be given to the diet, especially if the child is bottle fed.

W. E. WILSON, M.D.

IN my practice I encounter my proportion of these cases, and am in the habit of administering calomel in from a tenth to one-half grain doses, according to the

age of the child, and then following this up with subnitrate of bismuth, with very good results, as a rule. Of course, I always set about to remove the exciting cause of the trouble first of all. When I have said this much I have said about all I have to say on the subject.

L. S. COLTER, M.D.

CINCINNATI, OHIO.

Book Notices.

The Railway Age publishes THE RAILWAY OFFICIALS' DIRECTORY (formerly called "The Supply Men's Directory) containing the addresses of Chairman of Boards, Presidents, General Managers, General Superintendents, Purchasing Agents, Chief Engineers, Superintendents of Motive Power, Master Mechanics and Master Car Builders of all roads in the United States, Canada and Mexico.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. A yearly report of the progress of the general sanitary science throughout the world. Edited by CHARLES E. SAJOIS, M.D. The F. A. Davis Co., publishers, 1892.

The Annual for 1892 does not differ materially from its predecessors. There is no other digest of the medical literature of the world that can compare with it.

THE SCIENCE AND ART OF MIDWIFERY. By W. T. LUSK, A.M., M.D. New edition. Revised and enlarged, with numerous illustrations. New York: D. Appleton & Co., 1892.

The rapidity with which the foundations of our science are being torn out and replaced is evidenced by the fact that this standard work, whose last preceding edition appeared in 1885, has now been entirely rewritten, making it, as the author says, "essentially a new book." The work, therefore, retains its position as a trustworthy text-book of midwifery.

THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM. A manual for students and practitioners. By CHRISTIAN A. HERTER, M.D. G. P. Putnam's Sons, 1892.

A very good condensed manual of nervous diseases; clear and explicit without being wordy.

VARICOCELE AND ITS TREATMENT. By G. FRANK LYDSTON, M.D. With illustrations. Chicago: W. T. Keener, 1892.

In this volume Dr. Lydston has brought together all that has been presented of value on this subject, illustrated from his own very large experience.

CEREBRAL MENINGITIS. By M. W. BARR, M.D., 1892. Geo. S. Davis, Detroit, Mich. Price, paper, 25 cents.

THE SCALPEL appears as the organ of the Chicago College of Physicians and Surgeons; a monthly, beginning in June, 1892, and edited by Louis J. Mitchell, M.D. It is devoted to college work and college gossip.

THE PRESCRIBERS' PHARMACOPŒIA. Second edition. 1892. Kemp & Co., Ltd., Bombay.

This very useful little book comes to us from India. Although printed so far from the centers of Western culture, it is none the less valuable, as the data in it could not have been better selected or more conveniently arranged. All the new drugs are included, and the copious therapeutic index is especially to be commended.

The Medical Digest.

CHOLERA INFANTUM.—

℞.—Naphthalini ..... gr. xx-lxx
Ol. bergamot ..... gtt. i-ij—M.
Et ft. chart. No. xii.
Sig. One powder every two or three hours.
—*Holt.*

℞.—Acid sulphuric aromat ..... ♏xxiv
Liq. morphiæ sulphat ..... f℥j
Elix. curacoæ ..... f℥ij
Aquæ ..... q.s. ad f℥iij.—M.
Sig. Teaspoonful every three hours for a child one year old.
—*Goodhart and Starr.*

℞.—Hydrarg. cum cretæ ..... gr. ij.
Sacch. lactis ..... gr. x.—M.
Et ft. chart. No. xii.
Sig. One powder every hour.
—*Ringer.*

℞.—Acid. sulph. aromat ..... gtt. xxiv
Ol. caryophylli ..... ♏viij
Tr. opii camph ..... f℥j
Spt. chloroform ..... gtt. xlviij
Syr. zingiberis ..... q. s. ad f℥iij—M.
Sig. Teaspoonful every two hours for a child of one year.
—*Hare.*

℞.—Hydrarg. chlorid. nit ..... gr. j.
Cretæ prep ..... gr. xxxvj
Plumbi acetat ..... gr. xij
Pulv. ipecac ..... gr. iij—M.
In chart. No. xii div.
Sig. One every three hours.
—*Condie.*

℞.—Tinct. cocæ (1-5) ..... f℥j
Sig. Four to six drops every two hours at three months of age. Fifteen to twenty drops in older children.
—*Diederichs.*

℞.—Hydrargyri cum creta..... gr. ij
Bismuthi subnitratis ..... gr. xxiv
Pulveris nucis myristicæ.... gr. ij
Misce et divide in chartulas xii.
Sig. One powder every two hours.
—*R. A. F. Penrose.*

℞.—Resorcin..... gr. viij–xl
Syr. aurantii cort..... f℥j
Aquæ aurantii flor.....ad f℥ij–M.
Sig A teaspoonful every two hours.
—*Fliesburg.*

℞.—Saloli ..... gr. vj.
Sacchari lactis ..... gr. x—M.
In pulv. No. xii div.
Sig. A powder every two hours. (For a child aged six months. Between five and ten years old, three grains of salol may be taken every two hours.)
—*Goelet.*

The *Medical World* publishes a special Cholera Infantum number, from which the following abstract has been taken :

J. Suydam Knox recommends : For acute dyspeptic diarrhœa, a dose of calomel (1 to 3 grains), warm enemeta, spice poultices, bismuth subnit. (gr. 2 to 3), cerium oxalate (gr. ¼) and Dover's powder (gr. $\frac{1}{10}$), each hour till better. At first no food, but alcohol ; later, egg-albumen, etc.

For thermal diarrhœa, cool bath, bromides and chloral ; stimulants and antipyretics as required.

For cholera infantum, alcohol, morphine or atropine, hypodermically ; by the mouth 15 to 20 drops of a $\frac{1}{100}$ solution mercury bichloride, every 15 minutes. Baths for fever.

J. A. Larrabee speaks of the good effects of morphine and atropine hypodermics in cholera morbus, and urges their use in cholera infantum. His claims are, the certainty of dose and effect, and the reserve of the stomach for food and water. As soon as reaction occurs, he gives small doses of calomel, lime water and carbolic acid, and a diet of toast-water exclusively.

Woodbury says : There are several popular errors with reference to hot-weather diarrhœas in infants.

1st Error. It is a common but erroneous belief that summer complaint, as it is called, is due directly to increased atmospheric temperature, and is peculiarly and exclusively a hot-weather disease.

2d Error. The assumption that bowel disorder occurring in infants during hot weather is due to a single cause, or always due to the same combination of causes, is not warranted by experience.

3d Error. The idea that infantile diarrhœa is a disease of closely built cities and of crowded communities, and does not exist in suburban or rural life is a common mistake.

The treatment is not for diarrhœa, for cholera infantum, or for summer complaint. The mistake is frequently made of simply prescribing sedatives and astringents as in the functional diarrhœa of adults. This treatment in infants yields the worst results and is generally followed by the death of the patient. Both opium and vegetable astringents are highly dangerous in the treatment of young infants with diarrhœa. The child should be comfortably clad in clean rather loose garments, and should be protected from not only extreme heat, but from chilling by draughts, night-air, etc. The child does not suffer directly from the effects of the heat but indirectly, and chilling of the surface is more to be feared than an external temperature of from 98° to 100°, which, by the way, is the temperature normal to the infant when folded in its mother's arms with its head upon her breast. As a measure of safety, the baby should wear a flannel bandage covering its stomach and protecting from sudden chill. If there is a dry, hot skin, the child may be put in a tepid bath, or simply sponged with warm water, once or several times daily.

The feeding is of the highest importance. To some infants, a teaspoonful only of sterilized milk may be given every quarter or half an hour, others will bear larger quantities at regular intervals of from two to six hours. In this connection it should be borne in mind that summer diarrhœa is often due to over-feeding, and especially too-frequent feeding. During the attack, it is of service to restrict the quantity of milk, or to suspend it altogether for a time, and simply administer albumen of egg diffused in water and slightly sweetened with white sugar. Arrow root or ice water may be given ; but no water unless previously sterilized by boiling. If the patient is very restless, and there are frequent passages, enemata of boiled starch, of about the consistency of syrup, may be used, containing a few grains of chloral and bromide of potassium or of sodium. Large enemata of warm water (irrigation of the bowel) are signally useful ; good results have also been reported from washing out

the stomach with warm sterilized water. The medicinal treatment proper, or the treatment by drugs, occupies a place secondary to the hygienic treatment. Where there is distinctly a cause of irritation in the contents of the bowel, or there is poisoning by tyrotoxicon, the administration of castor oil or a saline purge is the first step. If there is only indigestible food, the syrup of rhubarb is a safe and efficient remedy. The bowels being clear, due attention should be paid to the diet in order to keep them so. Where there is collapse or great feebleness, some stimulant is necessary, and old brandy or whiskey is very useful if carefully administered in 10 or 15-drop doses. Bovinine, which contains 10 per cent. of old Bourbon whiskey, is especially serviceable in treating infants with summer diarrhœa or so-called cholera infantum. A good wine of coca is often very happy in its effects on young children, as in adults, suffering with disordered digestion. Pepsin acts as a sedative to the stomach and aids in nourishing the child by facilitating digestion. Pepsin and bismuth, in small doses, control vomiting. Where the diet is milk (properly diluted and always sterilized), calf pepsin in the form of glycerite of calf pepsin is highly valuable; it should be administered immediately after the bottle has been taken. Where there is intestinal indigestion and irritation, with green, slimy stools, papoid with bicarbonate of soda has a prompt effect. In order to prevent fermentation of the contents of the gastro intestinal tract, salol is used with advantage in minute doses, or salicylic acid with the addition of sodium bicarbonate and bismuth, if desired. The addition of a very small amount of aromatic powder as a carminative is useful.

With regard to arsenic or arsenite of copper, corrosive sublimate, calomel, and other remedies of this class, while admitting the fact that they have been reported to be curative in skilful hands, the occasion rarely arises in my opinion where it is prudent or safe to use them. In fact, as already intimated in this brief paper, the chief idea in treating cases of so-called cholera infantum, should be the prophylactic and hygienic management—pure air, properly prepared food, attention to the skin, avoiding extremes of temperature or sudden changes from heat to cold —rather than any reliance upon any drug or combination of drugs.

When the source of the attack clearly resides in a polluted atmosphere, it is scarcely necessary to add that it is of primary importance to substitute for it the purer air of the country, the mountains or the sea-shore. If this is out of the question, we may, at least, give the little patients a chance for life by taking them out frequently on the river or to the various parks.

W. J. Maddox recommends aconite and niter for fever; sulphocarbolate of zinc, bismuth and pepsin for the diarrhœa, and camphor for the collapse.

W. J. Craigen gives calomel and cerium to check vomiting; bismuth and paregoric for diarrhœa, and salicylate of soda for fetid stools.

W. T. Coggin renders the bowel aseptic by the use of castor oil, carbolic acid and corrosive sublimate.

G. H. Marshall bathes and swathes his patients in a decoction of hickory leaves.

G. W. West relies on bismuth and carbolic acid.

W. C. Abbott employs arsenite of copper, zinc sulphocarbolate or calcium sulphide as antiseptics, with brucine, strychnine and phosphoric acid as stimulants.

W. C. Cline gives corrosive sublimate, followed by copper arsenite, salol or bismuth.

J. Spalding prefers heavy magnesia, with hyd. cum creta, and pure olive oil as a laxative.

C. C. Pike sprays the child's throat and mouth hourly with bichloride, 1 to 1,000.

For Summer Diarrhœa.—

℞.—Pepsin pulv..... gr. ¼
Bismuth subnit..... gr. ija gr. iij
Ext. nucis vom. pulv..... gr. ⅛
Sulpho-carbolat. zinc..... gr. ij
Carb. animal..... gr. ¼
For one tablet or capsule.

—*D. H. Bartine.*

The treatment of the green diarrhœa of infants with lactic acid, instituted by Hayem, of Paris, has proven quite successful. The following is Hayem's formula:

℞.—Lactic acid..... 2 grammes
Syrup..... 98 grammes
Essence of citron..... 1 drop.
Dose, one tablespoonful, frequently repeated. This makes a two per cent. solution.

Treatment of Summer Diarrhœa in Children.—At the onset of bowel

trouble give ʒiss of castor oil to clear out the bowels thoroughly, and after every movement following that caused by the oil, give a teaspoonful of the following mixture:

R.—Bismuth. subnit..... gr. cccxx
Acid. carbolic.....
Spt. menth. pip.....
Tinct. capsici..... āā mx.
Spt. camphor.....
Syr. simplic,
Aq. cinnamon.....āā q. s. ad ʒviij.

If movements are very frequent, the same dose may be given every two hours. When temperature rules over 102° F., and patient is pretty strong, give acetanilid gr. iss every three hours. I have observed that the antipyretic effects of this drug last almost exactly three hours in children. If patient is weak, lower the temperature by sponge baths, and where fever runs below 102° F., substitute for these, aconite gr. $\frac{1}{100}$, ever hour. Spirit. frumenti is necessary in small, frequent doses where exhaustion supervenes. Give every morning and evening, with soft rubber catheter, a high irrigation of starch-water, warm, to which is added ʒss soda bicarb. to the pint.

Children usually cry a great deal, and it is the natural thing for the mother or nurse to give them their accustomed food to stop them. This must not be allowed. They are inclined to drink greedily and overload their already weakened stomachs, and aggravate their trouble. It is best to feed them at their accustomed times only, and give them the plain, cool, boiled water to quench their thirst. Plenty of fresh air is desirable, and a cool, even temperature is best. Upon very hot days it is well to remove the ordinary clothes and put on a light flannel night-dress, guarding against sudden changes of temperature, of course. I have tried other plans, but this gave very satisfactory results.

—Alice McLean Ross, M.D., *Med. and Surg. Reporter.*

Insomnia of Summer Diarrhœa.—In the summer diarrhœa of young children, whatever mode of treatment may be pursued, there usually arises in the later stage of the disease a condition of extreme restlessness, alternating with semi-conscious dozing, with the eyes partly closed. It is recognized that a few hours of actual sleep would be a boon. It is not a condition that invites the use of opiates. More than once have I known the following to mark the turning-point of the case for the better:

R.—Kali bromide..... gr. xij
Chloral hydrat..... gr. xvj
Glycerine..... dr. j
Aquæ carni..... dr. vij
M.—Sig. One tablespoonful hourly, to three doses, if needed.

—Benj. Edson, M.D., of Brooklyn, N. Y., in *The Medical World* for Oct., 1891.

The Treatment of Infantile Diarrhœa of Warm Countries.—Dr. F. Roux divides the diarrhœas into four classes:

1. Simple catarrhal enteritis, frequently developed by cold, requires only rest, restricted diet, soothing applications to the abdomen, and graduated doses of paregoric.

2. Diarrhœa dependent upon digestive insufficiency, requires a small amount of magnesia in a half-glass of Vichy (St. Yorre) as a purgative, a milk diet, and soups devoid of fat. If the stools are offensive, a powder consisting of the equal parts of the salicylates of bismuth and magnesia; naphthol being here contra-indicated because of the irritation which it produces. The return to the ordinary diet must be gradual, and before each meal he directs small doses of nux vomica, rhubarb, anise seed, and calumba, in a claret glass of Vichy or Vals. During the meals hydrochloric acid, and afterward pepsin, diastase and pancreatin. He counteracts diarrhœa and vomiting by opium, the constipation by rhubarb.

3. The diarrhœa that follows dysentery calls for enemata of boric acid, nitrate of silver, or tincture of iodine, and the prescribing of a strict diet.

4. In true tropical diarrhœa the small intestine is the seat of disease, and it is necessary to insist upon intestinal antisepsis, salicylate of bismuth, sulphocarbonated water, enemata of boric acid, or, better, of borated infusion of eucalyptus, with abdominal counter-irritation, as by tincture of iodine, or gentle frictions with flannel moistened with turpentine. The only method of satisfactory cure consists in an absolute milk diet, to which is added lime-water or Vichy-salt. As soon as the stools are formed, beef tea, peptones, slightly cooked white of egg and raw beef, eggs and milk, and, last of all, rice in

milk can be tried. At all times remedies which assist digestion must be employed, while wine and every form of alcohol is absolutely prohibited. When the disease is cured, it is necessary for a long time to watch over the diet, and use remedies that build up the general condition.

—*Revue Générale de Clinique et de Thérapeutique*, 1892, No. 9, p. 137.—*Am. Med. Jour. Sciences.*

Sulpho-Carbolate of Zinc.—In anticipation of the approach of the summer months, with the usual train of bowel troubles and consequent mortality, I desire to invite attention to zinc sulpho-carbolate as a gastro-intestinal antiseptic. In every class of remedies there will be found one superior to the others, in which you place greater confidence because of the greater certainty of its action—in a word, its specificness. Such an one is the sulpho-carbolate. Because of the ease with which it is taken, because of its freedom from toxic properties, and because it will certainly and effectively either destroy or render powerless those agencies whose activity develops diarrhœas, dysenteries, entero-colitis, cholera infantum, and by their absorption, typhoid fever and numerous blood dyscrasias, it should be universally adopted by physicians.

Let the first case of summer complaint be treated with sulpho-carbolate, using the following :

℞.—Zinci sulpho-carbolatis,
gr. xxiv vel xxxvj
Sac. lactis..... ℥j
M. et div. in chart No. xxiv. Sig. One powder every three or four hours till stools lose offensive smell and character.

This will be adapted to a child a year old. To older children, larger doses must be given. Frequently this, without other treatment, will answer the purpose. Of course, in all cases, and especially in grave ones, due attention should be paid to alimentation. Except to infants who nurse a healthy mother, and sometimes even to them, milk should be denied. Give the white of an egg beat up in water, or iced water, sweetened or not, scraped beef tenderloin, well seasoned broths, or some one of the best artificially prepared foods. Milk must be excluded, as it is one of the most prolific culture fields for disease-producing germs.

—R. B. McCall, *Med. Summary.*

Salicylate of Bismuth in Infantile Diarrhœa. (*Obozrenië*, No. 6, 1892.) Mikhnevitch, having tried the salicylate of bismuth in fifty cases of diarrhœa in infants under two years of age, reports that of the number only two died (a boy of eight months with pelvic suppuration consecutive to intractable colitis, and an infant of five months, born prematurely, and exceedingly sickly since its birth). The following formula is recommended :

℞.—Bismuthi salicylici..... gr. xxiv.
Gummi arabici..... ℥j
Sacch. albi ..... ℥jss
Terendo adde aq. dest. ..... ℥ij
Fiat lac, tum adde aq. dest... ℥iv.
M.—S. The bottle to be kept in cold water or ice, and to be shaken well before use. One or two teaspoonsfuls to be given from three to six times daily.

Each teaspoonful of the mixture contains about ½-grain of the salicylate, which constitutes a normal dose (three or four times daily) for an infant of from six to eight months old. In cases of offensive diarrhœa the administration should be preceded by a dose of castor oil. The bismuth salt should be given regularly until the diarrhœa has completely subsided. It must be kept in mind, however, that in large doses the remedy is apt to induce perspiration with consecutive weakness (especially in exhausted children), hence a corresponding reduction of the dose may become necessary. In acute cases the remedy is useless, but in all of a week's standing or longer its effects are said to be excellent.—*Brit. Med. Jour.*

Ileo colitis.—Van Goidtsnoven has obtained most satisfactory results from the following :

℞.—Hydrarg. chlorid. nit. ..... gr. j
Bismuth salicylat.....
Salol.....
Pulv. carbo ligni..... āā gr. xii
Div. in chart. No. xii.
M.—Sig. One powder every four hours.

Antiseptic irrigation of the bowels is also to be employed.—*South. Med. Record.*

The Treatment of Hill Diarrhœa.—Altitude affects blood-pressure, and hence the secretions of the body. Intestinal fluxes are often due to this altitude effect upon blood-pressure. In the *Lancet* we find the following abstract of an interesting article in the May number of the *Indian Medical Gazette* on this subject, by Surgeon Lieut.-Colonel A. Com-

bie, M.D., the surgeon superintendent of the General Hospital, Calcutta. He says that every cold winter he sees a number of patients who give the history of having suffered from hill diarrhœa during the previous summer; but who, in detailing the treatment which they have received, do not mention the remedies which have been found to be very efficacious in his own experience and in that of others. Without going minutely into the causes of hill, diarrhœa it may suffice to say that it is a disease liable to occur at hill stations where the elevation is 6,000 feet or more above the sea level. One of its peculiarities is that, in recent cases, the diarrhœa is confined to one particular portion of the day, beginning between 3 and 5 o'clock in the morning and lasting until 9 A.M. It is a disease of adults; children under twelve years of age being very rarely affected. Many persons going from the plains of India, on reaching an elevation of 6,000, feet immediately begin to suffer from symptoms of dyspepsia and flatulent distension of the stomach and intestinal canal. These symptoms may exist with or without diarrhœa. In the former case the motions are very light in color, like whitewash, liquid and frothy. On the approach of monsoon influences the hill diarrhœa becomes an epidemic. In July, 1880, at least one-third of the population of Simla suffered from it; and had the epidemic been one of cholera instead, with its attendant mortality, it is questionable whether the survivors would have been sufficiently numerous to have buried the dead. Dr. Crombie considers that it is not a true diarrhœa, but an indigestion due to an imperfect secretion of the digestive ferments generally, including those of the bowel. The treatment consequently consists in supplying the deficiency in the secretion of these ferments, and in the administration of intestinal antiseptics to check the abnormal fermentation set up by the absence of bile and other secretions in the small intestine. The line of treatment indicated is threefold. Living at high altitudes being the principal cause of the disease, all that is necessary for its cure is a return to a lower level. In early cases this alone is sufficient to put a stop to the symptoms in twenty-four hours. In the second place, the epidemic being closely related to the monsoon influences, those liable to hill diarrhœa should leave the hills at the beginning of the rains, as is now done at Darjeeling every year. The third measure consists in the administration of pepsin, the extreme usefulness of which was accidentally discovered by Dr. John Anderson and Dr. Crombie in 1881, and in the use of perchloride of mercury, the value of which in tropical diarrhœa was recognized and pointed out by Surgeons MacPherson and Barry. Peptonized milk or 10 or 12 grains of pepsine or ingluvin two hours after food, is generally sufficient to relieve the symptoms. The solution of the perchloride of mercury is best administered ten or fifteen minutes before each meal. Dr. Crombie appends the notes of various cases in illustration of the foregoing statements.

ACUTE DYSPEPTIC DIARRHŒA.—The child may appear in its usual health, but has an increase in the number of stools, without fever or special disturbance except slight restlessness at night. After persisting for a day or two the stools become more frequent and contain undigested food and curds, and are very offensive. In other cases the disease sets in abruptly with vomiting, griping pains, and fever, which may rise rapidly and reach 104° or 105°. There may be convulsions at the outset. The abdomen is sensitive, and the child lies with the legs drawn up. The stools consist of grayish or greenish-yellow feces mixed with gas curds and portions of food. In children over two years of age, such attacks not infrequently follow eating freely of unripe fruit or the drinking of milk which has been tainted. With judicious treatment, the children improve in a few days; but relapses are not uncommon, and in the hot weather the attack may be the starting point of a severe enterocolitis. In a debilitated child a mild attack may prove fatal. This dyspeptic diarrhœa is distinguished sharply from cholera infantum by the character of the stools, which never have a watery, serous character. In many instances this form precedes the onset of the specific fevers, particularly during the hot weather.

Cholera Infantum.—This is the counterpart in the infant of the so-called choleraic diarrhœa in the adult, and in their clinical aspects these two forms are identical. It is by no means so common as the ordinary dyspeptic diarrhœa of children, according to Holt, occurs only in two or three per cent. of the cases of summer diarrhœa.

It prevails in the hot weather and in the children artificially fed, or who have had previously some slight dyspeptic derangement. It is characterized by vomiting, uncontrollable diarrhœa, and collapse. The disease sets in with vomiting, which is incessant and is excited by any attempt to take food or drink. The stools are profuse and frequent; at first fecal in character, brown or yellow in color, and finally thin, serous and watery. The stools first passed are very offensive; subsequently they are odorless. The thin, serous stools are alkaline. There is fever, but the axillary temperature may register three or more degrees below that of the rectum. From the outset there is marked prostration; the eyes are sunken, the features pinched, the fontanelle depressed, and the skin has a peculiar, ashy pallor. At first restless and excited, the child subsequently becomes heavy, dull, and listless. The tongue is coated at the onset, but subsequently becomes red and dry. As in all choleraic conditions, the thirst is insatiable; the pulse is rapid and feeble, and towards the end becomes irregular and imperceptible. Death may occur within twenty-four hours, with symptoms of collapse and great elevation of the internal temperature. Before the end the diarrhœa and vomiting may cease. In other instances the intense symptoms subside, but the child remains torpid and semi-comatose with fingers clutched, and there may be convulsions. The head may be retracted and the respirations interrupted, irregular, and of the Cheyne-Stokes type. The child may remain in this condition for some days without any signs of improvement. It was to this group of symptoms in infantile diarrhœ that Marshall-Hall gave the term "hydrencephaloid" or spurious hydrocephalus. As a rule, no changes in the brain or other organs are found, and the condition is no doubt caused by the toxic agents absorbed from the intestine. A remarkable condition of sclerema is described as a sequel of cholera infantum. The skin and subcutaneous tissues become hard and firm, and the appearance has been compared to that of a half-frozen cadaver.

Acute Entero-Colitis.—In this form the ileum and colon are not affected, chiefly in the lymph follicles, hence the term follicular enteritis or follicular dysentery. It occurs more frequently in warm weather, in artificially fed children; but it may set in at any season of the year, and is the form of enteritis most common as a secondary complication in the specific fevers of childhood.

The attack may follow the ordinary dyspeptic diarrhœa. The temperature increases, the stools change in character and contain traces of blood and mucus, the former usually only in streaks. The feces are passed without any pain. The abdomen is distended and tender along the line of the colon. Vomiting may be present at the outset, but is not a characteristic feature, as in cholera infantum. The diarrhœa may be gradually checked and convalescence is established in two or three weeks; in other instances the disease becomes subacute, the fever subsides, but the diarrhœa persists and the general health of the child rapidly deteriorates. The case may drag on for five or six weeks, when improvement gradually occurs or the child is carried off by a severe intercurrent attack. In a third form of acute entero-colitis, in which anatomically the lesions are those already mentioned—namely, an intense follicular inflammation—the symptoms are of a more severe character, and the affection is sometimes spoken of as acute dysentery. It attacks children up to the third or fourth year, or even older. The onset is sudden, with high fever, vomiting, frequent stools, which at first contain remnants of food and feces, and subsequently much mucus and some blood. There is incessant pain, which may be more severe than in any intestinal affection of childhood. The prostration is very great and the fatal termination may occur within forty-eight hours. More commonly the case lasts for a week or longer. In two cases of this sort, in one of which death occurred in forty-eight and in the other in sixty-four hours, the anatomical characters were those of the most acute follicular enteritis, characterized by great swelling of the lymph follicles, some of which already presented necrotic foci.—*From Osler's Practice.*

Symptomatology and Treatment of Summer Complaint.—The most prominent symptoms in summer complaint are those connected with the bowels. The diarrhœa is characterized by stools which differ from each other greatly, as to number, consistency, color, and odor. Of the several phases of the stools, the

odor is the one to which I wish to call particular attention. It is indeed remarkable with what certainty the stools may be divided by their odor into putrid stools and acid stools. Occasionally the stool will be described as having an intensified fecal odor, or smelling like old wood, but it is evident that such odors are but variations of putridity. The acid stools derive their odor from the presence in them of various members of the fatty acid group, all of which have arisen from fermentation of carbo-hydrates. The putrid stools, on the other hand, can only arise from fermentations of albuminous materials. I told you in my last lecture that we know of no poisons that can be produced by the fermentation of the carbo hydrates, alcohol excepted, that can produce symptoms on the part of the nervous system, but that all the poisons that we know of, which are capable of producing symptoms through the medium of the central nervous system, and which may be formed from foods, are nitrogenous poisons. Let me recall some of the nitrogenous poisons: Every alkaloid which a vegetable contains is a nitrogenous product; morphine, quinine, atropine, the whole long list of vegetable alkaloids contain nitrogen; the long list of animal alkaloids, the ptomaines and leucomaines, contain nitrogen; every one of the toxalbumins contains nitrogen. The stools of putrid diarrhœa are liable to contain nitrogenous poisons. Why? Because putrid products can only occur from the fermentation of nitrogenous material. It does not follow because a stool is putrid that it contains poisons, but it shows that it has been formed by the fermentation of proteids, and, therefore, probably contains poisons. If, on the other hand, it is sour, it shows that fermentation has been maintained by the carbo-hydrates, from which such poisons cannot be elaborated. Baginsky says that one stool may be sour and the next one putrid, the next one sour, and so on, from the various forms of fermentation that may go on in different parts of the intestinal canal at the same time. Theoretically this is true, but practically it is not. When we find a child passing putrid stools it continues to pass putrid stools for several days, and when it passes sour stools it continues to pass sour stools for several days. The acid form is a milder form of the trouble, it produces agents which act locally only, whereas the putrid form produces agents which act through the central nervous system, therefore if we are able to transform a putrid diarrhœa into an acid diarrhœa we eliminate certain definite sources of danger. We may have a putrid and a sour fermentation going on at the same time, the sour fermentation being masked by the more pungent odor of the putrid fermentation. But the putrid fermentation is an indication of danger. My friend, Dr. Rachford, of Newport, Ky., has called attention to the fact, that if we have fermentation of proteids with the formation of poisons, whether there happens to be putridity or not, there will be symptoms referable to the central nervous system, and, therefore, if we have such symptoms due to poisons formed in the intestinal canal, whether with or without putrid stools, we should treat the case in the same manner as I shall teach you to treat putrid stools.

We may have stools which are large and watery, we may have stools which are small and more or less coherent. The stools may be characterized by containing blood and mucus, they may be accompanied in their passage by pain, or by straining, or by bearing down, tenesmus; they may be characterized in color by being pale, or yellow, or green, or brown, but every one of these changes is referable to the variations in the fermentations in the bowel. It seems certain that the green stools of summer complaint are due to certain chromogenic bacteria, but the green stools are by no means the worst.

In many cases where the stools are green, due to the growth of certain chromogenic bacteria, we have no general systemic trouble, but on the other hand, where we have rather innocent-looking stools, nothing but a little rice-water discharge, our patient is seriously ill. In every such case of cholera infantum there has always been putrid stools at first, and they are no longer putrid, simply because everything has been washed out of the bowel. My own experience is that brown stools are the most foul in point of odor, and the most apt to be accompanied by severe symptoms on the part of the general nervous system. The variations in color are unquestionably due to the variations in growth of the micro-organisms in the intestinal canal, but may sometimes be due to the food. Mellin's food, for instance, produces a brown stool, but

such stools are innocent. Some of these patients have fever and some have not. Why? Simply because in some instances poisons capable of producing rise in temperature are formed, in other instances poisons of this kind are not formed, so in one case we have fever and in another we do not. Fever is then purely an accidental condition. Again, we will have on the part of the brain such symptoms as convulsions. But convulsions are not due, I take it, to simply the draining away of the serum which the large number of movements has produced, but to the production of a convulsive poison, something that can produce convulsions, something like strychnine. I do not say that strychnine is elaborated in the bowel, but a poison having a somewhat similar action. Another point of importance is the question of coma in these cases. Some years ago, when I treated these cases exclusively by opium, I used occasionally to find a little one with what I considered opium poisoning. Later, after I had stopped using opium, once in awhile the same kind of case would occur. On questioning the mother I would find that no opium had been given outside of my direction, and something else must be at fault. I see several such cases every year, characterized by contracted pupils, stupors, sometimes coma, by slow respiration and slow pulse. Now, there has been formed in the bowel of that child a poison which acts like opium and produces these symptoms. How shall we get rid of it? I have invariably given the nitrate of potash and water, and in the course of two hours, invariably profuse urination has occurred and with it all symptoms have disappeared; in other words, the poison has been washed out through the kidneys. Here, then, is one set of symptoms which is evidently produced, so far as clinical information can teach us, from something developed in the bowel. Again, we have patients troubled with insomnia, and it is likely that this sleeplessness is caused by poisons produced in the same general way. Now, let us take up the question of depression, for that is the most important one. Our little patient is weak, the fontanelle has sunken, the eyes have sunken, the skin is cold and the pulse indicates collapse. Now to what is that due? Is it because the baby has had four or five or a dozen stools that day? No. If you had given the baby sulphate of magnesia there would be the same loss of serum. Would the child be in that shape? No. There is another element there besides the number of stools. I believe the mere number of stools is of secondary importance. The question of loss of fluids we have been taught to think much of—too much indeed. But let us suppose we had introduced a motor depressant into this child's blood, say conium or curare, what would have happened? Almost the same condition of collapse. It is evident that the collapse has been produced by some poison, and not simply by the number of stools that have been passed. If we believe the collapse to be due wholly to the number of stools, we would most rationally proceed to stop the stools; we would give the child opium, tannic acid or anything to stop the flow from the bowels. But if it is due to a poison that has been formed in the intestine, what are we to gain by stopping the number of stools? Nothing. We may even do damage by retaining in the bowel the source of the trouble. I beg of you, then, to regard summer complaint as presenting various phases, but due entirely to poisons formed in the intestinal canal. On the other hand, we find that sour stools cannot produce poisons of this kind, but still we have movements from the bowels, and we can only explain the phenomenon on the ground that the products of acid fermentation are directly irritating to the mucous membrane of the bowel and act by locally stimulating the bowel, by locally increasing its functions. But remember that such irritations do not and cannot produce collapse; that they do not and cannot produce coma; that they do not and cannot produce convulsions; all the serious conditions are thrown to one side and only the local ones of increase in the number of stools and pain remain. Now, then, here comes in the explanation of Dr. Rachford. If these depressed conditions occur, no matter what the number of the stools may be, the trouble is due to poisons formed from nitrogenous material. If we can stop the proteid fermentation, even if we have to leave an acid fermentation, we shall make a decided gain for our patient.

Now as to the treatment proper. It consists of two general steps: first, to remove the cause; second, to repair the damage done. These two steps apply to almost any disease, but particularly to this one.

First, remove the cause. How? We have found that the cause is due to certain fermentations going on in the bowel. Let us get the poisons out of the bowel. How? By the use of laxatives first. To empty the bowel of a baby, gentlemen, is a work of art, it is not a simple thing. We can give a dose of castor oil and have a certain number of stools produced, we can give a dose of calomel and have a certain number of stools produced, but we are by no means certain that we have emptied the bowel of the child. Don't forget this point; it is exceedingly important. I shall refer to it again. My preference by way of preliminary cathartic is calomel in grain doses, four hours apart until 3 grains are taken. I give a child six months old 1 grain of calomel every four hours until it has taken three doses. Sometimes a child may be having eight or ten stools a day; you give it calomel and it will be brought back the next day with a report of four or five movements instead of the increase you had reason to expect. I cannot explain this phenomenon, but it occurs with sufficient frequency to attract attention. The actual number of stools will be diminished under the action of the cathartic, and what is more, the child will be better, irrespective of the number of stools. Sometimes the number of movements will be very much increased; the child will be having four or five a day, and after taking the calomel it will have eight or ten or more, and yet be better. I have never seen any bad results from the use of calomel, although bad results are reported under such circumstances, but I have prescribed it so many times and given it to so many babies under these circumstances that I have no hesitation in giving it in the quantity mentioned to a child six months or older; the quantity need not be increased for older children. If too large a dose is given it is simply swept out of the system, there is no such thing as giving too much in order to purge freely. But understand that the calomel empties the bowel only partially, and by no means does it always get everything out.

What shall we do next? To still further empty the bowel I would recommend the use of copious injections of water, and they can be introduced either with or without the aid of a rectal tube. The quantity of water to be put into a child's bowel is something to be considered. In one method of irrigation the water is allowed to run in and out at the same time. By that means only the lower part of the bowel can be washed. My plan is to fill the bowel with water, I want to reach the cæcum, because there is where most of the trouble lies, where the greatest amount of damage has been done, where the autopsies prove that most of the poisons have been absorbed. Because there is where we have the most ulcers, and no matter whether we have enteric disease or dysenteric disease symptomatically, the actual lesion is in that part of the colon. I put into a child a year old a quart of water at a time, and it will hold it. This seems rather a large quantity, but patient after patient I have had in my clinic, brought before the class for the distinct purpose of showing them how much water a child will hold, and it is remarkable how much they will take. I set the quart as a limit; a half gallon will nearly fill an adult's colon. But some judgment must be exercised with regard to the quantity used; if you have reasons to believe that the bowel is badly ulcerated and liable to be torn because of pressure, you should not put in such a quantity of water, but in an ordinary acute case you can put a quart in. A fountain syringe is the safest means of introducing the water. When it is in it runs out again, of course, as soon as you take away the tube. But the bowel does not completely empty itself at once. The mother will tell you that the child passes about a pint and then stops, and the remaining water will come away in about twenty minutes or half an hour. Do not put into the water you use to wash the bowels any poisonous antiseptic; do not use bichloride of mercury to wash the bowels, because you might have enough of it stay behind to produce poisonous symptoms. It is not needed; clean water is quite enough. The object of the water is to wash out the bowel and clean out the little loculi. You remember in the large bowel there are little pockets at one side, which form convenient places for fecal matter to lodge in, and when we give brisk cathartic like calomel, it strikes right past these pockets and does not clean them out; but with the slow washing out of the bowel the water will seek out these pockets, and clear out their contents. Very frequently these masses of retained feces are the sources of the poisons. This

illustrates the substantial identity of putrefactive constipation and summer diarrhœa, and justifies their being included under a single term.

Now we have gotten this bowel clean, apparently so at least, by means of the preliminary purge and the washing. So far so good, but we have only taken out of the bowel the larger mass of material there present; we have not washed it clean. You could not sterilize in that way a test tube, and much less so complicated a tract as the bowel. You have not got it clean, but you have got the bulk of the material out and you have removed the bulk of the poison, but the germs remain behind, at least enough of them to set up the trouble again. Our baby will probably seem better; some of the symptoms have disappeared, and the child is undoubtedly better, but we want to kill the germs there, we want to kill the particular germs that are producing the trouble. How can we do it? We have at our disposal a large number of intestinal antiseptics; the best among them are unquestionably calomel and bismuth. The calomel which we have originally given, acts as an antiseptic, but its action is only temporary; it does not and cannot sterilize the bowel. If we wish to use it still further as an antiseptic, we will give minute doses of one-tenth or one-twelfth of a grain every three or four hours, but the result will be only partially satisfactory. Next to that, our best antiseptic is bismuth, and to employ it successfully as an antiseptic, we must use it in massive doses. The dose of bismuth, like calomel, is not to be measured with great accuracy. I usually give a dose of ten to fifteen grains three or four times a day to a child six months or a year old. Bismuth does not produce any systemic effects, but you want to give enough to produce an effect in the intestinal canal, and two or three grains of bismuth are not enough. There is one objection to bismuth. Besides being an antiseptic, it unquestionably is, to a certain extent, an astringent. Many times I have thought the diminished number of movements following the use of bismuth were due to the curative effects of the drug, and that the poison had been destroyed, but I have reason to believe that it was really due to astringent effect of the bismuth, and this effect in the early stage of the treatment is not desirable, because it retains the poisons we want to get out. Then we have naphthalin, salol, resorcin and a whole host of drugs of that type, but they are unsatisfactory. Fortunately, we have a much better means at our disposal. Suppose we have a diarrhœa and the stools are distinctly putrid; we know there has been fermentation, and that the germs producing it are living on proteid material, so we simply keep that kind of material out of the bowel and starve the germs; there you have the keynote of the whole method of feeding. Starve the germs; do not try to get them out with chemicals, because you cannot do it. You accomplish something in that way, but you cannot kill them all. But when the child has a putrid diarrhœa, you must keep away from it all proteid material, keep away meat, fish, milk and eggs. Keep away those foods which are capable of undergoing putrefaction. Meat would not be given to a child of that age; fish would not be given to a child of that age; eggs would possibly be given, but milk would most certainly be given. Milk has been the chief diet of this child before it was taken sick, and the proteids of milk are what the germs in that intestinal canal are best adapted to live on. Above all things stop milk; that is the first thing to do when you have a putrid diarrhœa. Do not be led into giving milk because the books tell you that it is a bland and non irritating diet. That means nothing. We are not trying to save that bowel because it is in an irritated condition, but we are trying to prevent the formation of poisons, and therefore we will keep out of the bowel material from which they can be formed, and that is in this instance proteid material. Now, if we have to keep proteid material out what shall we put in? Anything which cannot support the obnoxious germs; anything which will starve them out and still be food for the child. The books tell us that in severe cases we should stop all food. If we stop all food we can certainly starve the germs, but it strikes me we are going to starve our little patient also, and put a strain upon him that is unnecessary. If we must take away meat, fish, eggs and milk, let us give him the starches and sugar. Many years ago Moore, of England, advised that these cases be fed on cane sugar exclusively. Such a diet is right, but you don't need to limit them to cane sugar; give them starches. I take a child six months old with putrid diarrhœa and give it arrow root, or rice, or

crackers, or baked potato, but not milk. But you look surprised to hear me advocate potatoes and crackers—solid food in diarrhœa. When we have the theory of this disease that I have attempted to give you, that it is not due simply to an irritated condition of the bowel, why not give solid food? I assure you, from a personal experience of several years in this matter, that solid foods act most beneficially. Milk is a solid food; it is not liquid. It is only liquid before ingestion. The first thing that happens to it in the stomach is coagulation, so that it is probably more irritating from a mucous membrane standpoint than any amount of starch. We are told these babies cannot digest starch because they have no salivary secretion and no distinct pancreatic secretion. I will admit the physiological statement that their salivary and pancreatic secretions are both deficient, but I deny the other statement. It has been assumed that because these two secretions are deficient, that infants cannot digest starch; but we all know of babies who have been given arrow root from their birth, and who have digested it perfectly. We all know that babies can and do digest starch; they do it daily. Why, there is a hardly a secretion in the body but is capable of digesting starch so that it can be absorbed. Right here I wish to be understood that I do not advocate starch as a continuous food for infants, but I am speaking of its use for temporary purposes; it does help that child along when it is poisoned; it does serve a purpose with that child when we want to take away other kinds of food, and in giving starch we have the advantage of not depriving that little one of all food. How about predigesting the starch? We do not need to predigest the starch; the great bulk of children can digest starch, particularly the small amount necessary for our purpose.

I told you that milk was bad for this condition; how about peptonized milk? Peptonized milk is worse. Why? I know some of you have used peptonized milk, and in some cases with good results, but I wish to assert that if you did get good results in those cases, you could have gotten better results in some other way. This preparation is generally bad. In the first place, it is peptonized by means of a pancreatic ferment. If you will experiment, by putting some hard boiled egg in a solution of pepsin and hydrochloric acid, and leaving it over night at the temperature of the body in a suitable oven, you will find that it has not only digested completely, but that it has a peculiar odor that is not unpleasant; but take the coagulated egg albumin and put it with trypsin in an alkaline solution, and subject it to the same conditions, and you will find, as you open the incubator, that it has a distinct fecal odor. If you leave it a few hours longer, the fecal odor will become stronger, and in a few more hours the odor will be unbearable. The mass has become putrid. Now the action of trypsin upon proteid material is to break it up in such a way that the germs of putrefaction can thrive therein. They thrive readily in the products of tryptic digestion, but not readily in the products of peptic digestion. The milk partially peptonized by this pancreatic extract, is only in a better shape to undergo putrefactive changes when it reaches the stomach and bowels. If you put it into a perfectly healthy alimentary tract, no harm will occur; but if you put it into a bowel that is already contaminated with putrefaction-producing micro-organisms, you have only helped those micro-organisms to the extent to which you have digested that food. Understand, I do not say that there are no conditions in which peptonized milk may prove useful, but am merely condemning its use in the putrid diarrhœa of infants.

Now about sterilized milk. It is practically pure so far as germs are concerned, but just as soon as the sterilized milk reaches the infected intestine, the germs there begin to develop in it; not so readily, perhaps, as in unboiled milk, but just as certainly as in any other kind of milk. Sterilized milk, therefore, is not the proper food in putrefactive diarrhœa, because it has essentially the same chemical composition as any other milk, and it is the chemical composition that is guiding us at present, and not its bacteriological condition. Sterilized milk, therefore, should be used solely as a preventive; if we start with a healthy child and feed it sterilized milk, we run that much less chance of introducing pathogenetic micro-organisms into the intestines, but after they are once there, it has no power to get them out. Milk from the mother's breast does just as much damage as milk from any other source. Other things being equal, I would rather treat an acute case of diarrhœa in

a bottle baby than in a breast baby, because I can give the bottle baby just what I want to. Frequently I would take the baby from the breast for thirty-six hours, keeping up the mother's secretions by the breast pump, and feed the baby as I would like to; but we cannot always do this, and where I cannot do it I find that I do not get as good results in treating diarrhœa in breast-fed babies as in bottle-fed babies; I cannot cure them so quickly, because I cannot feed them right. Such a procedure is only necessary in severe cases.

How long is it necessary to withhold proteid food in acute diarrhœa? Twenty-four hours will usually suffice to correct the odor of the stools; at the end of that time stools which have been rotten will have lost their putrid odor, usually, and at the end of forty-eight hours they will certainly have lost their putridity. But it is desirable, where possible, to withhold proteid food for several days after the stools have lost their putridity. In chronic cases, where there is already ulceration of the intestine, the putridity is maintained by something besides the intestinal contents. Let us say the putridity has ceased, what will occur? Almost always the stool will become sour; in other words, an acid fermentation which has been going on in addition to the putrid fermentation continues, so that we still have left a cause for diarrhœa, but we have transformed a diarrhœa which was capable of causing nervous symptoms into one which is only capable of producing local symptoms in the bowel; we have transformed a dangerous trouble into one comparatively simple. That is what has been gained by the method of feeding.

I think this will give you, in a general way, my idea of how to remove the cause. Remove it by purges, remove it by washing out the bowel, remove it by antiseptics, and, above all, by starving out the germs by withholding their proper food.

One other thing: that is, washing out the stomach. It frequently happens that we cannot by all these means at our disposal control things as we would like to, and it becomes necessary to wash the child's stomach. Washing the stomach, particularly where vomiting is present, is of great service, but you are not required to do it very often. I have had comparatively few cases in which it was absolutely necessary, but I believe if I had resorted to it more frequently, I would have had better results; would have cut short more cases. But it is a very troublesome measure. Washing out the bowel is an easy matter, and can be done by the mother; but washing out the stomach is something you must do yourself.

The question of the treatment of vomiting in these cases is to be considered. The vomiting is probably not due, not al ways, at least, to local conditions, but, most likely, it is due to the poisons pro duced by the various fermentations present, and it disappears when the poisons are removed. When it is present, however, it is a very serious complication, as it prevents us putting anything at all into the child's stomach. If persistent vomit ing is present, we should always wash the stomach by means of the stomach tube, and this often gives relief.

We have removed the cause; how shall we repair the damage done? Ordinarily, with the removal of the cause, the child promptly recovers. But the matter is different in a severe case where the child has been seriously ill from a sharp attack of cholera infantum, and at the end of a few hours of illness is in a state of collapse; sunken eyes, sunken fontanelle and pale, cold surface; rolling the eyes about, opening the mouth, showing the dryness of the lips, etc. What shall we do? Evidently, in such a case, there is no time for delay; the damage is too severe; the poison must be directly combated. We will, of course, stop all food at once, because we cannot run the risk of doing that child further harm; particularly would we stop milk. We would wash the bowel as far as we could, for a double purpose: the one to remove from the bowel as much offending material as possible, although but little will be found; the other, to supply some of the fluids which have been lost. The water used should be as warm as can be borne. The peculiar depression must be combated by all possible means. First, by external heat in the shape of hot baths and hot blankets wrapped about the child to stimulate it. Opium here is of great value; so also is belladonna. It directly counteracts the poison present; it is a stimulant to this particular condition. Another thing: if it is possible to get fluid of any kind into the child, do it. Why? Because that fluid will pass out again through the bowel, possibly through the kidneys, and as it goes it will wash

out some of the poison which is doing the harm. Our object in a case like this is simply to support life. We cannot attack the case on the lines I have given you before; we must counteract the poisons as well as we can by heat, belladonna, opium in small quantities and by washing out, as far as we can, through the process of elimination.

In chronic cases, those which have lasted three weeks or more, the greatest good is accomplished by regular daily lavage of the bowels. The use of intestinal antiseptics, particularly bismuth, is of considerable service. In long-continued cases, laxatives can only be used occasionally. While the diet is to be directed on the same lines as those already laid down, it need not be adhered to so absolutely.

We all have our type cases of which we make much. Among mine is one which I should like to relate to you now: A rachitic baby, which had been under my observation for regulation of diet, was suddenly taken with convulsions. Apparently the bowels were in a pretty fair state at the time. The convulsions commenced at 4 o'clock in the morning, and lasted until noon. I first saw the child about 8 A.M. The temperature then was 102° in the rectum. I suspected the bowel as the source of the trouble, and endeavored to empty it. I gave the child calomel by the mouth, washed the large intestine, and gave by the rectum a small dose of croton oil in emulsion. Quite free purgation ensued, but the convulsions continued, and I was forced to think that they had their origin in some other cause, most likely the onset of some infectious disease. I was finally reduced to the necessity of administering chloroform to control the convulsions. In the afternoon the convulsions returned, and the temperature rose very rapidly until it reached 107½°. Cold baths and antipyrine were employed without success in combating the temperature. What was making this temperature? Just before the little one died, it passed a mass of the most putrid feces I ever smelled. There was the source of the trouble; it was absorbing poison from this mass, and if I had continued trying to empty the bowel, possibly I could have saved that child.

Now, then, to repair the damage done, we must meet the symptoms as they come up. If the child has fever we will endeavor to meet the temperature by sustaining the child's strength with alcohol and by producing sweating. If the temperature be high you can produce sweating in several ways. One way is to sponge the body over with almost ice-cold water, then wrap the child up well; there is an immediate reaction. The skin becomes red and soon there is profuse sweating. That can be done with a baby where you could not do it with an adult. So we take the temperature down, as in any other disease, but particularly do we look to the bowels as the source of the trouble in these cases. In those cases where the temperature runs up to 106° and 107°, and which are sometimes called sunstroke, the trouble is probably always in the bowels, and you should remember that even after you have given a cathartic you are not through with the bowels until the symptoms cease.

I should like to say a word regarding the opium treatment of this disease. For a number of years I treated these cases with opium. There can be no question but that good results can be obtained many times by the use of opium. In the first place because of its stimulant effects, and in the next place because it relieves the pain and thereby strengthens the child. If used in the shape of a Dover's powder, it acts as an eliminant and we have some of the poisons thrown out, and in general it is a direct antidote to the poison, so that the use of opium amounts to treating the poison by a direct antidote instead of treating the disease by getting rid of the poison. It is not so illogical as one would imagine, but I don't think the treatment is good; relapses, so-called, are more apt to follow the opium treatment than the plan which I have outlined.

Another thing please do not forget; that is, that you are at all times treating the baby, and not the disease. Never treat a case of putrid stools, but be kind enough to treat the baby who is unfortunate enough to have those putrid stools. We see cases where the child is passing the most abominable stools, and yet it may be well, happy and lively; don't put such cases amongst those I have asked you to treat; they are going to do well enough if you will let them alone. We must use judgment in these things. We have many cases come to us that fortunately do not present the exact conditions for interference on the lines I have laid

down for you; and remember they do not need any such interference; they will get well if you wash out the bowels. You must remember that it is not simply the putridity that directs you to interfere, but the continued severe nervous symptoms accompanying it.

Suppose the stools are already sour; theoretically, you have got to keep out the starches, but what have you to fall back upon? Nothing in the world but white of egg. At one time I tried this plan, with the result that I succeeded in changing acid diarrhœas to putrid diarrhœas. A sour diarrhœa we can treat with bismuth and complete withholding of food, or the use of milk. The milk will keep up the sour diarrhœa because of the sugar in the milk, but it is the best we can do. Remember that a sour diarrhœa is not ordinarily dangerous. We can also give opium, and this is the place where we may want opium. The acid produces colic in the bowel and also flatulence. The gas does not cause the pain; it is the acid that causes the pain. Lavage of the bowel can also be profitably employed. The acid form of the trouble is not so amenable to dietetic treatment on the plan I have given as is the putrid form, and we must treat it on other grounds.

—Christopher, *Jour. Am. Med. Assoc.*

Artificial Foods.—Peptonized milk was supposed to completely revolutionize infants' and children's feeding, when first suggested by Fairchild Bros., only a few years ago. I advised it frequently for some time, and on many occasions it appeared to work like a charm, especially in cases of gastro-intestinal catarrh. Latterly it has disappointed me, and during the last year I have not advised it more than two or three times.

Dr. Adams, of Washington, speaking of a couple of cases of gastro-intestinal catarrh in the Children's Hospital of that city not doing as well as his private patients, investigated and found that the resident physician was experimenting with peptonized and pancreatinized milk. He found that as soon as this was stopped and properly prepared cow's milk was substituted, the cases quickly recovered.

In regard to patent foods, Rotch says: "They must necessarily be unreliable; their claims are not supported by intelligent and unprejudiced investigation." Further, he thinks "it is high time for us, as physicians, to appreciate exactly how inefficient in themselves, and how misleading in their claims, are these artificial foods, and also in what a false position, as protectors of and advisers to the public, we are placed in doing anything but ignoring them." He is convinced, that the merit of their at times apparent success does not belong to them, but to other accompanying circumstances.

Adams (of Washington) also "desires to enter a protest against the use of the various 'infant's food' as substitutes for or aids to cow's milk. Mothers are attracted to them by the warnings posted in street cars, and the pictures of plump, rosy babies distributed by the druggists. Analyses by competent and honest chemists—not paid by the manufacturers—have shown them to be rich in the ingredients they are guaranteed not to contain, and to be deficient in those which are lauded as being present in larger proportion than in any other food."

—Machell, *Can. Practitioner.*

Boiled Milk.—A very important question, from the point of view of the nourishment of newly born children, is whether boiled milk retains a sufficiently nutritive value.

Formerly it was universally thought that milk ought to be used in a state as nearly like as possible to that in which it is when issuing from the breast, and uncooked milk was the only kind employed for feeding infants. Nowadays, however, since it has been clearly demonstrated that milk may be an agent for the transmission of various diseases, such as eruptive fevers, typhoid fever, and especially consumption, most authors and physicians agree in recommending that boiled milk only should be given to infants.

This practice is assuredly excellent from the point of view of prophylaxis against contagious diseases; but is it equally good from the point of view of alimentary hygiene, and, in feeding infants on boiled milk, do they get sufficient nourishment?

This question has been examined, with the aid of all the documents which could be collected, by Mr. Henry Drouet, in a little book just published at Paris. From his researches, made from the various points of view of physiology, clinical treatment, and microbes, results the general conclusion that boiling does not at all diminish the digestibility of milk, and con-

sequently does not diminish its nutritive value.

It may even be said that most of the experiments of physiologists tend to show that boiled milk is more digestible than uncooked milk, and that, in fact, the infants who can digest the latter better than the former, are the exception and not the rule.

The mortality of children brought up on the bottle has lessened for some years past in considerable proportions. This mortality, which formerly reached the figure of 90 out of every 100, has been reduced to an average of 10 out of every 100 in all the departments in which the Roussel Law has been diligently enforced. In the department of the Eure, that mortality, a few years ago, was but 7 in a 100. These happy results are plainly due in great part to the supervision of nurses required by the Roussel Law. Nevertheless, it must be noted that the superiority of boiled milk has been assented to by most physicians, and that they more and more require the nurses whom they superintend to feed their charges with boiled milk. It is then allowable to suppose that the use of boiled milk is one factor in the diminution of mortality in infants brought up on the bottle.

The only case in which there would appear reason for not boiling the milk, is when the animal which furnishes the milk is well known, and there can be no doubt about its apparently perfect state of health. Even in this case, however, the security is deceitful, for it is known that tuberculous animals have taken prizes in competitions of fat beasts, and that a diagnosis of tuberculosis limited to the teat —a form of the disease especially dangerous from the point of view of the transmission of the malady—is an extremely difficult sort of diagnosis.

The conclusion to be drawn is that milk destined for food of infants should always be boiled, without any apprehension of any alteration in the liquid, from the point of view of the preservation of its nutritive value.—*Literary Digest.*

It has been recently conceded that opium should never be given alone in acute digestive disturbances of children, but always in conjunction with some disinfectant. Moreover, the use of this drug in infants should be restricted to very small doses, never exceeding one or two drops of the tincture per diem. Many of the most recent writers discard opium entirely. Liebermeister, for instance, asserts that in children under one year of age, opium should never be used, claiming that even when given in minimum doses, so small that no beneficial action can be obtained, there is possible danger. He substitutes the tincture of nux vomica, and in cases of cholera infantum in infants about six months old, uses the following formula:

℞.—Sodii bicarb..... 2 grams.
Tinct. nucis vomica..... gtt. v.
Aquæ foeniculi..... 60 grams.
Sacch. albi..... 5 grams.
M.—Sig. One half teaspoonful every half hour.

The use of opium is attended with far greater danger in children than in adults, and symptoms of poisoning and collapse are only too easily produced, especially as in these cases of digestive derangement there is a tendency to collapse. Sonnenberger reports a case of severe opium poisoning, which fortunately terminated favorably, in a child one and a half years old, that had been given seven drops in the course of a day and a half of the simple tincture of opium. If opium be given at all, it should be only in those cases in which there is no tendency to collapse. Seifert, the eminent German pædiatrist, gives the following table of doses:

For children up to one year of age, ½ to 1 drop of the simple tincture of opium daily; from one to two years of age, 1 to 2 drops, always in combination.

The formula in which Sonnenberger has so successfully employed resorcin is as follows:

℞.—Resorcin pur..... 0.1-0.25 grams.
Infus. chamom..... 70.0 grams.
Tr. opii camph..... gtt. 1 to 11
Syr. aurant. cort..... 20.0 grams.
M.—Sig. Half a teaspoonful every one or two hours.

The opium may be replaced by tincture of rhatany or tincture of cascarilla. Excellent results can confidently be expected from the use of this formula.

—*Med. and Surg. Reporter.*

A Strange Case of Epilepsy.—There has just been discharged from the City and County Hospital an epileptic with a peculiar surgical history. The patient, a very intelligent man, about thirty-two years of age, gives a history of no form of nervous disease in family, and

of splendid personal health up to eight years ago, when he was struck over the head with a billiard cue, which laid him up for a few days. The next summer he was in Peru, South America, and contracted a fever, for which he was ordered arsenic. It appears that he took large doses, as much as 10 to 12 minims of Fowler's solution ter in die, over a period of two months, at the end of which time, on a hot day, he had an epileptoid convulsion. This recurred every month for about a year, when they gradually became more frequent up to the time when he first came under observation, in April, 1889, when the attacks were daily. He said he had no convulsion at night, but after admission to the hospital, we soon found they were nocturnal as well as diurnal. There was no aura, no premonition of any kind, no consciousness during the attacks, nor any paresis following. The movements appeared general from the start, but perhaps were a trifle earlier on the right side. On examination there was a well marked depression found on the scalp, just posterior to the line of the fissure of Rolanda. This was chiefly on the left side, but extended across the median line and corresponded to the site of injury with the billiard cue. Dr. R. A. McLean operated after making it the subject of a lecture. He pointed out that ordinary symptoms of Jacksonian epilepsy were marked by reason of the pressure being on both sides, on the motor areas. A broad flap of the scalp was dissected up, and the calvarium was found apparently normal in every particular, with not a sign of any depression or fracture. The trephine was, however, applied, and a piece of bone as large as a silver half dollar removed; the membranes, as well as the surface of the brain, being found healthy. A needle was then passed in three directions to a depth of two inches into the brain tissue, but nothing abnormal discovered. The patient recovered without a bad symptom, and was discharged in six weeks, having had no return of the epilepsy at that date. He applied for re-admission in the early part of 1890, stating that after the operation he had not had any fit for over six months, but after that date the previous symptoms had recurred and had now again become frequent, so that he had to give up his business. Another operation was undertaken at his request, and the opening enlarged, during which the superior longitudinal sinus was opened and plugged. The patient got well and was discharged as before, and re-appeared in May, 1891, eager for another operation. He was told of the danger of proceeding further, and how little good could be expected, but he insisted on the operation, saying his life was useless as he was, and that the few months respite were well worth the danger of the operation. Dr. McLean then operated on him the third time, removed more bone, and turned back the flap, dressing it open. The epilepsy has since recurred about once a month, and of late not quite so frequent, having been, to date, nearly two months without an attack, the patient has "got religion" and is happy. He has left the hospital with a window in his skull over seven inches in circumference, the flap has contracted to a small nodule, and the brain is covered with a layer of white pearly cicatricial tissue. There was never anything found to account for the epilepsy, yet there is no doubt that the patient was benefited by each operation, and that he is now in a great deal better condition than when we first saw him in 1889.

—*Weekly Med. Review.*

THERAPEUTIC NOTES.

(E. W. Bing, M.D., Chester, Pa., Translator).

Extirpation of a Tuberculous Kidney (Baginsky).—A child suffering under tuberculous affection of the bones and joints was attacked by measles, accompanied with intense albuminuria. The urinary sediment was composed of pus corpuscles (casts), made up of fat globules and epithelial cells, and also containing tubercular bacilli.

A diagnosis of renal tuberculosis was made, but the question was as to which kidney was affected, when there appeared behind and to the left side a slight prominence with dullness on percussion, both of which gradually increased in extent and intensity. There was then considered to be a tuberculous lesion of the left kidney, together with, in spite of the absence of fluctuation, perinephritis. The kidney greatly hypertrophied, and enclosing tuberculous foci of considerable extent was removed.

The child is still alive; the cellular elements in the urine have diminished in such a way as to give reason for hope that

the other kidney remaining healthy may supply the functions of the removed organ.
—*La Medicine Moderne.*

Resection of the Peripheral End of Nerves in the Treatment of Certain Neuralgias.—This operation was done by Pollosson, on a person fifty-four years of age, subject to neuralgia for fourteen years. He had six years previously undergone a resection of the inferior dental nerve. A year's relief followed this operation. Four years afterwards the pains made their appearance in the region supplied by the inferior dental and the three branches of the trigeminal. The latter were cut, six months' ease followed this; then Pollosson determined on a resection of the peripheral end of the inferior dental, and at the same time a section of the lingual nerve. The ease obtained was immediate. It was the cutting of the lingual nerve which cured the patient perhaps, but M. Pollosson says not. The sensibility has disappeared in the limits of the inferior dental. If the neuralgia recurs he will do the same operation on the peripheral part of the other inferior dental nerve.
—*La Medicine Moderne.*

Hyper Secretion of the Cephalo-Spinal Fluid as a Cause of the Symptoms Which Supervene After Operations on the Nervous Centers.—M. Pollosson had made punctures on a child of fourteen months with hydrocephalus; the patient experienced a rise of temperature and died without presenting convulsions or muscular rigidity. The autopsy showed simply an enormous quantity of cephalo-spinal fluid.

In another case, a small female child, idiotic and epileptic, had previously had an operation on the cranium. The child had crises of epilepsy which were attributed to the pressure of the thickened skull. Trephining showed the presence of an erectile tumor near the superior longitudinal sinus. Death occurred two days afterwards. There was considerable rise of temperature, 42.1 C. Respiration was very frequent, and the pulse extremely rapid. No vomiting or muscular rigidity (contractures). At the autopsy, the wound was aseptic. There was neither meningitis nor cerebritis. The quantity of the rachidian fluid was much increased. Pollosson thinks certain operative measures can cause death from compression of the medulla by an increase in quantity of the rachidian fluid.—*La Medicine Moderne.*

Two Rare Cases of Typhoid Fever (Gerlœzy).—The first case was an example of mixed infection by the bacilli of typhoid fever and diphtheria which did not recover. The autopsy proved the diagnosis. The second case was an apyretic one, complicated with general grave symptoms. It recovered. These facts bring it into the category of cases of typhoid fever characterized by a depression of internal temperature in connection with cerebral irritation.—*Revue Generale.*

Antiseptic Treatment of Burns (Maylard).—When a serious burn has occurred and there exist necrosed tissues, septic manifestations are produced during the period of elimination and repair, and gives rise to an oppressive odor. These are the causes of inconvenience and even of danger in serious burns. The burn having taken place, the action of the heat has rendered the part sterile, and the method of treatment pursued by the author has in view the keeping of it antiseptic, and the prevention of decomposition. He cuts away the clothing around the burnt part and bathes the wound with a hot solution of sublimate $\frac{1}{2000}$, to wash away all foreign bodies or to render those sterile which he is obliged to allow to remain. The surface is then covered with a protective soaked in the same solution, then with a pad of boric gauze, wet again with the sublimate solution; then he covers the whole with a thin sheet of rubber and finishes the dressing with a "sublimated" bandage. The dressing is changed every two, three, or four days, according to the amount of discharge. The author reports six cases dressed in this way with excellent results. These are the advantages of the method: "The sterilized parts of the burn" are kept aseptic; no inflammation is developed, and in consequence no mortification ensues. Suppuration is wanting. Dressings are few; there is little or no pain at the removal of the dressings; no odor; necrosed tissues are rapidly removed by healthy granulations. The resulting cicatrix is reduced to the minimum by the preservation of a large part of the tissue, the healing gives no local trouble. There is an absence of any general symptoms.
—*Rev. Gen. de Med.*

TREATMENT OF CHRONIC INFANTILE RHEUMATISM (Simon).—1. Immobilization of rheumatic joint, which are painted with tr. iodine, or covered with hemlock plaster.

2. Internally colchicum and iodides of the alkaline earth. For fifteen days 15 cgms. of iodide of potassium are given with each meal, or the syrup of iodide of iron may be used instead.

For the next fifteen days, during the day, there may be administered from 5 to 10 drops of wine of colchicum ind.

—*La France Med.*

ANTI-CONSTIPATION PILLS (Huchard).—These pills are indicated in heart troubles, complicated with hepatic congestion.

℞.—Aqueous extract ergot..... 3j.
Powd. squills..... gr. xlv.
Powd. digitalis..... gr. xv.
Calomel..... 3ss.
F.—Sig. ut ft. pil 40.
Dose.—2 to 4 daily, for three or four days.

Or this:

℞.—Powd. digitalis.... ..... } each gr. lxxv.
" squills..... }
" scammony..... }
Syrup acacia.
For 100 pills.
Dose.—2 or 3 daily.

—*La France Med.*

News and Miscellany.

DR. H. W. WHELPLEY and Miss Laura E. Spannagel were married at the Church of the Unity, St. Louis, on June 29. We wish the young couple all happiness and prosperity, and regret that the distance prevented an attendance. Dr. Whelpley is well known to our readers through his brain children.

RULES FOR THE MANAGEMENT OF INFANTS DURING THE HOT SEASON.—RECOMMENDED BY THE OBSTETRICAL SOCIETY OF PHILADELPHIA, AND PRINTED BY THE BOARD OF HEALTH, WITH SLIGHT MODIFICATIONS.—RULE 1.—Bathe the child once a day in lukewarm water. If it is feeble, sponge it all over twice a day with lukewarm water, or with lukewarm water and vinegar. The health of the child depends much upon its cleanliness.

RULE 2.—Avoid all tight bandaging. Have light flannel as the inner garment, and the rest of the clothing light and cool, and so loose that the child may have free play for its limbs. At night undress it, sponge it, and put on a slip. In the morning remove the slip, bathe the child, and dress it in clean clothes. If this cannot be afforded, thoroughly air the day-clothing by hanging it up during the night. Use clean diapers, and change them often. Never dry a soiled one in the room in which the child is, and never use one for the second time without first washing it.

RULE 3.—The child should sleep by itself in a cot or a cradle. It should be put to bed at regular hours, and be early taught to go to sleep without being nursed in the arms. Without the advice of a physician, never give it any spirits, cordials, carminatives, soothing syrups, or sleeping drops. Thousands of children die every year from the use of these poisons. If the child frets and does not sleep, it is either hungry or else ill. If ill, it needs a physician. Never quiet it by candy or by cake; they are the common causes of diarrhœa and of other troubles.

RULE 4.—Give the child plenty of fresh air. In the cool of the morning and early evening, have it out of doors for a little; take it to the shady side of broad streets, to the public squares, to the Park, or make frequent excursions to the rivers. Whenever it seems to suffer from the heat, let it drink freely of water which has been boiled and cooled by ice. Keep it out of the room in which washing or cooking is going on. It is excessive heat that destroys the lives of young infants.

RULE 5.—Keep your house sweet and clean, cool, and well aired. In very hot weather let the windows be open day and night. Do your cooking in the yard, in a shed, in the garret, or in an upper room. Whitewash the walls every spring, and see that the cellar is clear of all rubbish. Let no slops collect to poison the air. Correct all foul smells by pouring chloride of lime into the sinks and privies. This article can be got from the nearest druggist, who will give the needed directions for its use. Make every effort yourself, and urge your neighbors to keep the gutters of your street or of your court clean.

RULE 6.—Breast milk is the only proper food for infants. If the supply is ample, and the child thrives on it, no other kind

of food should be given—while the hot weather lasts. If the mother has not enough, she must not wean the child, but give it, beside the breast, goat's or cow's milk, as prepared under Rule 8. Nurse the child once in two or three hours during the day, and as seldom as possible during the night. Always remove the child from the breast as soon as it has fallen asleep. Avoid giving the breast when you are over-fatigued or over-heated.

RULE 7.—If, unfortunately, the child must be brought up by hand, it should be fed on a milk-diet alone—that is, warm milk out of a nursing bottle, as directed under Rule 8. Goat's milk is the best, and next to it, cow's milk. If the child thrives on this diet, no other kind of food whatever should be given while the hot weather lasts. At all seasons of the year, but especially in summer, there is no safe substitute for milk if the infant has not cut its front teeth. Sago, arrow-root, potatoes, corn-flour, crackers, bread, every patent food, and every article of diet containing starch, cannot and must not be depended on as food for very young infants. Creeping or walking children must not be allowed to pick up unwholesome food.

RULE 8.—Each bottleful of milk should be sweetened by a small lump of loaf-sugar, or by half a teaspoonful of crushed sugar. If the milk is known to be pure, it may have one-fourth part of hot water added to it; but, if it is not known to be pure, no water need be added. When the heat of the weather is great, the milk may be given quite cold. Be sure the milk is unskimmed; have it as fresh as possible, and brought very early in the morning. Before using the pans into which it is to be poured, always scald them with boiling suds. In very hot weather, scald the milk as soon as it comes, and at once put away the vessels holding it in the coolest place in the house—upon ice if it can be afforded, or down a well. Milk carelessly allowed to stand in a warm room soon spoils and becomes unfit for food.

RULE 9.—If the milk should disagree, a tablespoonful of lime-water may be added to each bottleful. Whenever pure milk cannot be got, try the condensed milk, which often answers admirably. It is sold by all the leading druggists and grocers, and may be prepared by adding to six tablespoonfuls of boiling water without sugar one tablespoonful or more of the milk, according to the age of the child. Should this disagree, a teaspoonful of arrow-root, of sago, or of corn-starch to the pint of milk may be cautiously tried. If the milk in any shape cannot be digested, try, for a few days, pure cream diluted with three-fourths or four fifths of water—returning to the milk as soon as possible.

RULE 10.—The nursing bottle must be kept perfectly clean; otherwise the milk will turn sour, and the child will be made ill. After each meal it should be emptied, rinsed out, taken apart, and the nipple and bottle placed in clean water, or in water to which a little soda has been added. It is a good plan to have two nursing-bottles, and to use them by turns. The best kind is the plain bottle with a rubber nipple and no tube.

RULE 11.—Do not wean the child just before or during the hot weather; nor, as a rule, until after its second summer. If suckling disagrees with the mother, she must not wean the child, but feed it in part, out of a nursing-bottle, on such food as has been directed. However small the supply of breast-milk, provided it agrees with the child, the mother should carefully keep it up against sickness; it alone will often save the life of a child when everything else fails. When the child is over six months old, the mother may save her strength by giving it one or two meals a day of stale bread and milk; which should be pressed through a sieve and put into a nursing-bottle. When from eight months to a year old it may have also one meal a day of the yolk of a fresh and rare-boiled egg, or one of beef or mutton broth, into which stale bread has been crumbled. When older than this, it can have a little meat finely minced; but even then milk should be its principal food, and not such food as grown up people eat.

Brief Rules for Cases of Emergency.—RULE 1.—If the child is suddenly attacked with vomiting, purging, and prostration, send for a doctor at once. In the meantime, put the child for a few minutes in a hot bath, then carefully wipe it dry with a warm towel, and wrap it in warm blankets. If its hands and feet are cold, bottles filled with hot water and wrapped in flannel should be laid against them.

RULE 2.—A mush poultice, or one made of flaxseed meal, to which one-quarter part of mustard flour has been added, or flannels wrung out of hot vinegar and water, should be placed over the belly.

RULE 3.—Five drops of brandy in a teaspoonful of water may be given every ten or fifteen minutes; but if the vomiting persists, give this brandy in equal parts of milk and lime-water.

RULE 4.—If the diarrhœa has just begun, or if it is caused by improper food, a teaspoonful of castor-oil, or of the spiced syrup of rhubarb, should be given.

RULE 5.—If the child has been fed partly on the breast and partly on other food, the mother's milk alone must now be used. If the child has been weaned it should have pure milk with lime-water, or weak beef tea, or chicken water.

RULE 6.—The child should be allowed to drink cold water freely.

RULE 7.—The soiled diapers or the discharges should be at once removed from the room, but saved for the physician to examine at his visit.

For the Convenience of Mothers the Follow Recipes for Special Forms of Diet are Given.—Boiled Flour or Flour Ball.—Take one quart of good flour; tie it up in a pudding-bag so tightly as to make a firm, solid mass; put it into a pot of boiling water early in the morning, and let it boil until bed-time. Then take it out and let it dry. In the morning peel off from the surface and throw away the thin rind of dough, and, with a nutmeg-grater, grate down the hard mass into a powder. Of this from 1 to 3 teaspoonsfuls may be used by first rubbing it into a paste with a little milk, then adding it to about a pint of milk, and, finally, by bringing the whole to just the boiling point. It must be given through a nursing bottle.

An excellent food for children who are costive may be made by using bran meal or unbolted flour instead of the white flour, preparing it as above directed.

Rice Water, Barley Water, etc.—Wash four tablespoonfuls of rice; put it into two quarts of water, with a little salt, and boil down to one quart, and then add sugar and a little nutmeg. This makes a pleasant drink.

A pint or half a pint of milk added to the rice water, before it is taken from the fire, gives a nourshing food suitable for cases of diarrhœa.

Barley, sago, tapioca, or cracked corn can be prepared in the same manner.

Beef Tea.—Take one pound of juicy lean beef—say a piece from the shoulder or the round—and mince it. Put it with its juice into an *earthen* vessel containing a pint of tepid water, and let the whole stand for one hour. Then slowly heat it to the boiling point, and let it boil for three minutes. Strain the liquid through a cullender, and stir in a litle salt. If preferred, a little pepper or allspice may be added.

Mutton Tea may be prepared in the same way. It makes an agreeable change when the patient has become tired of beef tea.

Raw Beef for Children.—Take half a pound of juicy beef, free from any fat; mince it very finely; then rub it into a smooth pulp either in a mortar or with an ordinary potato-masher, and press it through a fine sieve. Spread a little out upon a plate and sprinkle over it some salt, or some sugar if the child prefers it. Give it alone or spread upon a buttered slice of stale bread. It makes an excellent food for children with dysentery.

HARDENING THE SYSTEM.—My chief rule for food is dry, simple, nourishing household fare, not spoiled by art or by strong spices. I am no Puritan, and gladly allow a glass of wine or beer, but without regarding them as important, as many persons believe them to be.

I oppose thick woolen clothing worn next to the skin, but I approve of clothing made of firm, dry, strong linen, or hemp-cloth. The last named is to me the best skin on the skin, which never effeminates it, but does the good service of a rubber. The many-branched, hairy, greasy texture of the wool on the bare body I look upon as a sucker of fluids and warmth, as a concurring cause of the dreadfully spreading want of blood in our weak, miserable generation.

The most natural and most simple means of hardening is walking barefooted. Grown-up people in towns, especially those who belong to the higher classes, cannot make use of this practice; that is quite clear. Yet what is to prevent them from taking a promenade in their bare feet for ten, fifteen, or thirty minutes at night before going to sleep, or in the morning when rising?

A special and extremely efficacious kind of walking barefooted, is walking in the grass, no matter if it be wet with dew, rain, or watering. This practice I can highly recommend to young and old, healthy and sick, no matter what other

application they may be using. The wetter the grass, the longer one perseveres in the exercise, and the oftener it is repeated, the more perfect will be the success. The exercise is generally taken for from fifteen to forty-five minutes.

About the same effect is produced by walking on wet stones, which is more convenient and easy for many people. Walking in newly-fallen snow produces even greater effect than the two practices mentioned. Walking in water reaching as far as the calf of the leg, has influence on the entire body, and strengthens the whole system. In winter snow may be mixed with the water. With weaklings, warm water may be used in the beginning, then, by and by, colder, and, lastly, quite cold water.—*Abbé Kneipp.*

THE following ordinance, enacted by the Governor of Malta, is taken from the Malta *Government Gazette:*

For checking the spread of the disease commonly known as leprosy.—Whereas it is expedient to make provisions for checking the spread of the disease commonly known as leprosy, it is hereby enacted and ordained by his excellency the Governor, with the advice and consent of the Council of Government, as follows:

ARTICLE 1. Every physician or surgeon who, in the exercise of his profession, observes any case of the disease commonly known as leprosy, shall, within twenty-four hours, make a report thereof to the chief Government medical officer.

The same obligation to make the said report lies on the head of the family of any person suffering from the said disease, and, in his default, on the nearest relative residing in the same house in which the person suffering from such disease dwells, as well as on the person who occupies or has the management of the house or other place in which the patient dwells; in this case, however, the term for making the report referred to in the preceding paragraph is one month, to be reckoned, in regard to cases of leprosy existing before the promulgation of this ordinance, from the day of such promulgation, and in regard to all other cases, from the day on which the said persons became aware of such disease.

The punishments for any breach of the provisions contained in the preceding paragraphs shall be those established for contraventions.

2. It shall also be the duty of the superintendent of police to make to the said medical officer a report of any cases of the disease mentioned in the preceding article of which he may become aware.

3. If the chief Government medical officer, upon the receipt of the report referred to in Article 1, be of opinion that the person therein mentioned is suffering from the said disease, he shall immediately communicate such opinion to the Government in writing, and in any such case the head of the Government may, by warrant under the hand of the chief secretary to Government, order that such person shall be removed to an asylum for lepers in these islands, to be there detained during the whole period of the disease.

4. Whoever shall knowingly harbor or cause to be harbored any person suffering or suspected to be suffering from leprosy, with intent to conceal such disease, or to prevent the removal of such person to the asylum referred to in the preceding article, shall be liable to the punishments established for contraventions.

5. Persons detained in the said asylum may be seen by their relations and friends under such regulations as shall be made by the head of the Government.

6. In the said asylum males shall be separated entirely from females.

7. Each person detained in the said asylum shall be maintained at the expense of the Government, saving the right of the Government to be reimbursed by those who are bound according to law to supply maintenance.

The officer in charge of the asylum may, however, allow persons therein detained to provide meals at their own expense.—*U. S. M. H. Sanitary Reports.*

THE BEST LIST FOR THE POCKET CASE.—We present to our readers this week, one of the lists of forty-eight drugs in granule form, most suitable for the pocket case, as formulated by a progressive, wide-awake physician, Dr. D. S. Ellis, of Suffolk, Va. The doctor sent the list to the Philadelphia Dosimetric Co., 2009 Arch street, Philadelphia, in response to their offer of a prize for the best list, and was one of the successful contestants. We succeeded in obtaining this one, which we believe will be of great interest to all practitioners:

Aconitine.—For acute fevers, with strong, full pulse; headache in plethoric subjects, suspended menstruation.

Aloin.—For constipation, hemorrhoids, etc.

Arsenite of Copper.—For cholera infantum, diarrhœa of typhoid fever, intestinal antisepsis generally.

Amorphia Mur.—For producing emesis in acute poisoning, croup, whiskey narcosis, etc., and as nauseating expectorant in acute bronchial inflammations.

Atropine.—For opium poisoning, exhausting sweats, collapse, cholera infantum, enuresis, carbolic acid poisoning (hypodermically), acute coryza.

Atropin, $\frac{1}{500}$. *Morphine,* $\frac{1}{20}$.—For acute pain, generally; colic, cholera morbus, cramps, dysmenorrhœa.

Ars. Strychnine.—Nervous stimulant generally; failure of respiration; second stage of pneumonia.

Bichlor. Mercury.—For infantile dysentery and syphilis, and for making antiseptic solution for surgical dressing.

Calomel.—For irritable stomach, "biliousness," cholera infantum, etc.

Caffeine Cit.—For nervous headache, opium poisoning, hysteria, neurasthenia.

Cocaine Hyd.—For heart and nerve tonic, laryngitis, ulcerated mouth and sore throat, acute conjunctivitis (locally), foreign bodies in the eyes.

Calcium Sulphide.—For glandular enlargement and inflammation, abscesses, threatened mammitis, diphtheria.

Capsicum.—For stomachic tonic, stimulant, cold stage of intermittent fever, collapse.

Carbolic Acid.—For intestinal antiseptic in cholera infantum, dysentery and typhoid fever, irritable stomach.

Creasote.—For irritable stomach, gastric catarrh, tuberculosis.

Croton Oil.—For obstinate constipation, congestion of brain.

Digatalin.—For heart tonic in prostration of second stage of pneumonia, in cardiac weakness from any cause, as dilatation without hypertrophy, diuretic in suppression of urine, dropsies, etc.

Dover's Powder.—Anodyne and hypnotic in bronchitis, pneumonia, and other febrile diseases; cholera infantum for pain when there is no tendency to stupor.

Ergotin.—For hemorrhages (hypodermically), galactorrhœa, pneumonia, subinvolution.

Emetin.—For producing emesis, for acute stage of bronchitis and laryngitis.

Elaterin.—For dropsies and cerebral congestion in plethoric patients.

Gelsemine.—For trigerminal neuralgia, cardiac sedative in sthenic fevers.

Glonoin.—For angina pectoris, heart failure, syncope.

Hyoscine.—For delirium and sleeplessness in acute febrile cases, delirium tremens, mania.

Ipecac.—For acute stage of bronchitis, larygitis, etc; for vomiting of pregnancy and dysentery.

Labelin.—For asthma, acute bronchitis, whooping-cough.

Morphine Sul.—For colic, belladonna poisoning, cough, pain in any acute disease, as pneumonia, pleurisy, dysentery.

Pilocarpin Nit.—For producing diaphoresis in acute fevers, erysipelas, or galactogogue.

Picrotoxin.—For night sweats of phthisis.

Podophyllin.—For acute constipation, with torpid liver.

Podophyllin $\frac{1}{40}$ gr., *Calomel* $\frac{1}{10}$ gr.—For use in beginning of fevers, especially those characterized by furred tongue and sallow complexion, jaundice, cholera infantum.

Piperine.—For use as antiperiodic, intermittent fever.

Quinine Hydroferroc.—For malarial fever, high temperature in any form, without nervous symptoms.

Quinine Sulph.—For intermittent and remittent fevers, tonic and appetizer, malarial, neuralgia, pneumonia.

Sulphide Arsenic.—For chronic skin diseases, eczema, acne, etc.

Santonin.—For worms in the intestinal canal.

Strychnine Nit.—Nerve stimulant generally, and in dypsomania.

Strophanthin.—For mitral regurgitation, functional irregularity of heart action, renal dropsy.

Tartar Emetic.—For delirium (active) in acute diseases, first stage of bronchitis, delirium tremens.

Terebene.—For acute and chronic bronchitis, bronchorrhœa, flatulent dyspepsia.

Terpin Hydrate.—Indications same as above (Terebene).

Veratrine.—For sthenic cases of pneumonia, with quick, strong pulse; for mania-a potu, cardiac hypertrophy.

Acetanilid.—To reduce temperature in all sthenic fevers, headache, neuralgia, dysmenorrhœa.

Apiol, 1 drop.—For amenorrhœa, dysmenorrhœa, suppression of urine.

Sulpho-carbolate of Zinc.—For cholera infantum, typhoid fever, dysentery, cholera morbus.

Valerinate of Zinc.—For epilepsy, hysteria, chorea.

Valerinate of Strychnine.—Nerve tonic in neurasthenia, and allied diseases.

Sugar of Lead.—For diarrhœa, cholera infantum in chronic stages, hemorrhages.

Colchicine.—For gout and chronic rheumatism.

Hydrastin.—For gonorrhœa and gleet.

The last two are given to make out the number in case you don't allow my two compounds, atropine and morphine, and podophyllin and calomel.

D. S. Ellis, M.D.,
Suffolk, Va.

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PAGE

ORIGINAL ARTICLES:

THE NEW WOMANHOOD. By Anna M. Fullerton, M.D. - - - - - - - - - - - - - - - - - - - 35

MEDICO LEGAL TESTIMONY. By S. V. Clevenger, M.D. - - - - - - - - - - - - - - - - - - 37

SOME OF THE TYPES OF INSANITY IN RELATION TO MEDICAL TREATMENT. By Edward C. Mann, M.D., F.S.S. - - - - - - - - - - - - - - - - 42

THREE CASES OF CRANIAL SURGERY. By William H. Morrison, M.D. - - - - - - - - - - - - - - 45

EDITORIAL:

PREACHERS *vs.* MEDICAL ETHICS. *J. J. T.* - - - - 57

ANNOTATIONS:

Unintentional Oversight - - - - - - - - - - - 58
Worth One Year's Subscription - - - - - - - - - 58

LETTERS TO THE EDITOR.:

"The American Eclectic Medical College of Cincinnati." *Layne* - - - - - - - - - - - - - 59
Arsenite of Copper in Cholera Infantum. *Sangree* 59
Nitrate of Strychnine for Inebriety. *Allen* - - - 59
Jacksonian Epilepsy Following Traumatism. *Nance* - - - - - - - - - - - - - - - - - - - 59
Irritation of Bladder. *H. B.* - - - - - - - - - - 60
Treatment for Cystitis Asked. *J. M. R.* - - - - - 61
Bedford City, Va. *Baker* - - - - - - - - - - - 61

BOOK NOTICES:

Higher Medical Culture. *Dunham* - - - - - - 63
Materialism and Modern Physiology of the Nervous System. *Thomson* - - - - - - - - - - - 63
The Uses of Water in Modern Medicine. *Baruch* - 63
What to do in Case of Accidents. *Ricketts* - - - - 63

THE MEDICAL DIGEST:

To Relieve Headache (*Weiss*)—Curious Example of Applied Science (*Sheild*)—A Displaced Abnormal Kidney with Six Renal Arteries (*Shepherd*)—Wounds with Dynamite (*N. Y. Med. Jour.*)—Sea-Sickness and its Treatment (*Charteris*)—Arterio-Sclerosis (*Ross*)—On the Method of Administering Salol (*Balestier*)—Effects of an Overdose of Codeine (*Mettenheimer*) - - - - - - - - - - 56, 63-69

THERAPEUTIC NOTES. *Bing*—Formulæ: Diphtheria (*Richardson*), Functional Impotency (*Med. Age*), Whooping-cough (*Beale*)—Dermatol (*L' Union Med. de Canada*) - - - - - - - - - - - 69

MEDICAL NEWS AND MISCELLANY - - - - 69

MEDICAL CORPS, U. S. NAVY - - - - - - - - 70

NOTES AND ITEMS - - - - - - - - iv, viii

Original Articles.

THE NEW WOMANHOOD.

BY ANNA M. FULLERTON, M.D.,

Physician in Charge of the Woman's Hospital of Philadelphia.

IT is not surprising that the evolution of the new womanhood should produce considerable consternation in the public mind. The birth-throes of progress have been marked in the past by the rise aud fall of mighty empires, the upheaval of systems of religion and morals the most profound, social revolutions the most sweeping and destructive. The spirit of reform works, not by bringing "peace on earth, but a sword." Its fruits, however, are peace—"peace and good-will to men!"

From being "the first beast of burden, the first life force harnessed to the plow," woman has won her way through a long, weary line of travel to the position of "man's good angel."

As late as the sixth century man still presumed to question woman's possession of a soul, and was consequently dubious of her immortality. Even now, in the heart of the East, a man pollutes his lips by mentioning the name of a woman in public. "Despised and rejected of men" like the "Man of Sorrows, acquainted with grief," she has won her position today through courage, patience, and tenderness. What wonder that the parts of her brain concerned in the sensory functions should, under the strain of a life of endurance, claim the larger share of the blood coursing through it? Setting aside the fact that Sir J. Crichton Browne's experiments would seem to demand that he should have selected for his test the brains of men and women having had similar opportunities for intellectual culture before his results could have been regarded as conclusive, it is only to be expected that the portions of the brain prevented by the accidents of sex, hence of education and environment from active exercise

should be correspondingly depreciated in development.

With aspirations thwarted, activities suppressed, woman has waited throughout the ages—waited for the time when the chief moulding forces of civilization should cease to be contention, strife and unholy dominance; when the atmosphere of social life should be sufficiently clarified of evil thoughts and evil desires to make it possible for a woman's body (no longer the lawful prey of ungovernable lust!) to aid her spirit in its work of rescuing the fallen, tending the sick, and succoring the poor; when the romantic conception of woman as a being in mid-air, "a little higher than the angels, and a little lower than man!" might give way before the convictions of truth and soberness in a practical age.

For the pseudo-mediæval picture of the husband and father entering his home as "a temple at whose outer door all business cares should be laid aside, whose atmosphere is pure and elevating, the presence of whose presiding goddess is a constant incentive to higher and nobler thoughts" we can substitute the more realistic pictures of life to-day. The wearied, jaded man of work returns to his home to find, what? No temple with an angel enshrined therein! but a dwelling, however elegant, the very atmosphere of which breathes depression; a bundle of nerves (his better half) lies in her bedroom weeping over the petty annoyances afforded by the vicissitudes of household management, or recovering from the effects of a day's shopping, or taking a nap preparatory to spending the small hours of the night in the ball-room, to which he cannot accompany her. Should she be able to preside at the evening meal, he is regaled with accounts of the manner in which total depravity is exemplified in the actions of servants and children. Not infrequently he is obliged to hold a petty court and dispense justice concerning the vexed questions that arise in the family government. His spirit, burdened by the responsibilities of business or professional life, chafes as if stung by gnats; he speaks but not, etc., not "with the tongue of angels," and gloom settles down like a pall over the household; or, on another occasion, when his soul longs for rest, he is torn from his couch by the butterfly propensities of wife and children, and made to spend long hours in small talk with uncongenial acquaintances. What wonder that such a man flies to a club for refuge and finds solace for his woes in the attractions there afforded? The flippant woman, the untrained woman, the selfish woman, whose charity begins and ends at home, is not the being who will stand by a man's side as "a faithful watcher, a loving guardian, a spiritual companion, the salutary influence of whose presence will silently and constantly remind him of a sphere of activities higher than those of the material plane upon which his daily avocation compels him to live." If a man must live upon a "material plane" his wife's place is there, too, and together they may make it "a stepping-stone to higher things." Woman's counsel, like Ariadne's thread, has given the clue to many a centaur blindly groping among labyrinths.

"When the heart goes before and illumines the pathway,
Many things are made clear that else would lie hidden in darkness."

The pursuits and calculations of any honorable calling should not be in conflict with the higher principles of ethics. There should be no "debasing influences" in an honest business career. Social, political and business circles need as incentives to nobler activities "the pure soul" and "the refined mind." A good man and a good woman should be able to work side by side anywhere!

In their united lives, as husband and wife, "they twain, shall be as one flesh," was the dictum of the Creator, and a man should no more think of leaving his wife out of his business or professional cares and responsibilities than of leaving a portion of himself behind. For this reason a man desiring "to marry and create a home" will need to choose something more than a spoiled, delicate child to be "the mother of his children." As to the dire possibility of his finding he has "taken to his heart an attorney-at-law, a civil engineer, or even a doctress," we may venture the opinion that if the affair has been one of the heart, and not alone of the head (for it is possible to believe that a woman may sometimes be chosen for her womanliness, as a man for his manliness, apart from his profession, position or possessions) the adjustment of the affairs of family life will not be a matter of difficulty.

When a woman of life experience marries, she realizes that she is marrying a *man* and not a *god*, and it would seem that it might be a source of consolation to both parties to know, that should the need arise, their offspring will have an additional protection from the vicissitudes of life in the business ability of the mother. The propriety of a woman's keeping up a business or profession, independently of her husband, is a question which can only be decided by each case on its own merits. A woman who does not spend all her time shopping, visiting, or frequenting society resorts, may have considerable time for some useful occupation without neglecting husband and children.

The "chance (?)" which throws so many women upon their own resources, mainly upon the point of a needle or into the wash-tub! does, indeed, render it "more difficult every day for women to make an honorable livelihood." During ten years' experience in hospital work among women and children, one sees so often the wolfish eyes of want staring the innocent and helpless in the face, that the conventionalities of life which would debar a woman from preparing herself to face the possibilities of her future, seem as cruel a wrong as the barbarous practice in the East of binding a baby-girl's feet to prevent their development. Both cripple forever the activities of a human being with the same right to "life, liberty and happiness" in God's free world, as her brothers, whose "alien tyranny, with its dynastic reason of larger bones, and stronger sinews," crushes her to the ground to die helplessly and hopelessly, or to live by the ruin of her soul, unless an arm be outstretched to save?

Earnest women who have heard the bitter cry of suffering "out of the depths," and who have seen the soul-agony of the injured, defenceless and homeless, cannot live for pleasure alone, or devote themselves to the preservation of "charms" potent to the masculine mind. Their inmost being is stirred. They long to aid in "the great, sad, hungry world's work!" And, when such women, hungering for the knowledge that shall give them power, ask bread, do not men give them "a stone?" closing the doors of their great institutions, rich with the researches of ages, upon them; or, at the most, permitting them to pick up the crumbs that may fall from their tables.

A woman cannot be regarded as inefficient in practical work until she has had the same opportunities to be proficient afforded her which men possess. Even so great a thinker as Darwin has said, "Woman seems to differ from man in mental disposition, chiefly in her greater tenderness and less selfishness." It would take long years of equal opportunities to make it possible for a fair comparative estimate to be made of the working ability of the male and female intellects, nor would it seem desirable that the two should ever be found identical, for, as Tennyson tells us,

"Woman is not undeveloped man,
But diverse: * * *
Yet in the long years liker must they grow;
The man be more of woman, she of man;
He gain in sweetness and in moral height,
Nor lose the wrestling thews that throw the world;
She, mental breadth, nor fail in childward care,
Nor lose the childlike in the larger mind. * * *
And so these twain upon the skirts of time,
Sit side by side, full summed in all their powers,
Dispensing harvest, sowing the to-be,
Self-reverent each and reverencing each,
Distinct in individualities,
But like each other, even as those who love.
Then comes the statelier Eden back to men;
Then reign the world's great bridals, chaste and calm;
Then springs the crowning race of human kind.
May these things be!"

MEDICO-LEGAL TESTIMONY.

By S. V. CLEVENGER, M.D.

WHEN nervous and mental derangements are the subjects of controversy in medico-legal cases, justice can be greatly aided if the attorneys presented in the plainest manner the complete symptomatology of the complaint under discussion.

This advice will not only apply to those obscure disorders in which the symptoms are mainly subjective, and in varying degrees involve the credibility of the plaintiff, but even the grossly objective amputations can be understood in the clearer light afforded by such works as S. Weir Mitchell's "Injuries to Nerves." It should be remembered that surgeons and surgical works are concerned with the immediate results of the injuries, and do not take up the study of the nervous and mental derangements that sometimes follow upon injuries to the head, body, and limbs.

The very best test of the expertness of the witness is to compel him, either on direct or cross-examination, re-direct or re-cross, to describe in detail, completely and fully, the symptoms of the disorder under discussion, as laid down by standard authors. I was particularly reminded of the necessity for this upon recently hearing a wretched quack base his claim that the patient was suffering from spinal concussion, upon his having discovered that "her tongue was as red as a beefsteak, and that she had two abrasions at the lower end of the spine, each spot being the size of a quarter;" and this witness was allowed to escape without an adequate cross-examination.

Leaving out of account the work of Herbert W. Page, whose special pleading is acknowledged and discountenanced by the leading railroad attorneys, and the feeble work of his disciple Thorburn, entitled "Traumatic Hysteria," and the still feebler essays of the New Jersey Watson, who bumps a few dogs on their rumps and deduces that it is impossible for the spine to be hurt in a railroad accident, it will be found universally that respectable medical and surgical literature accepts the symptomatology of Erichsen detailed in his work on "Concussion of the Spine." The treatises and articles on nervous diseases written by celebrated neurologists, whom no expert witness would dare disparage, such authors as Erb, Bramwell, Ross, Gowers, Spitzka, Putnam, Knapp, and surgical authorities as Holmes, Agnew, and others, will be found to have accepted Erichsen's description of the results of spinal injuries, because they have verified his statements. In my recent work entitled "Spinal Concussion," I reviewed this subject and endeavored to bring to bear thereon what neurological information had been acquired since Erichsen's book was written. The matter of inflammation of the spinal cord was not so well understood formerly, and as this disease sometimes results from a spinal injury, it was confused with another kind of disablement of the cord, which I had the honor of naming "Erichsen's disease," after its discoverer; soon after announcing which I received the following letter:

6 CAVENDISH PLACE, LONDON,
February 15, 1890.

DEAR SIR:—Pray accept my best thanks for the copy of your work on "Spinal Concussion," which I have just received from your publishers. The subject seems to be more admirably and exhaustively treated by you. I assure you that I feel much gratified and very highly flattered by having my name appended by you to the group of symptoms so characteristic and remarkable when taken in the concrete, which I believe that I was the first to describe, which results from that peculiar form of spinal injury now recognized under the term of "Spinal Concussion."

Nearly a quarter of a century has passed since I first wrote on the subject, and it is a matter of sincere gratification to me to find that the views I then entertained and the opinions I gave utterance to have, in a great measure, been accepted by such distinguished neurologists as yourself, Erb and others.

Believe me to be, dear sir, most truly yours,

JOHN ERIC ERICHSEN.

A veritable case of Erichsen's disease resulting from spinal concussion has infinitely better chances of success in a law suit, and the contestant has also an immense advantage against a dishonest claimant by pinning the issue down to the symptomatology. If either side is dishonest, then shyster methods, denials of established facts, ignoring of medical literature, may succeed in blackmailing a corporation or defeating a badly injured plaintiff. In the interests of justice the court should demand that whatsoever is known on the subject should be used to enlighten the jury, and particularly when a medical witness is reluctant or unable to describe the ailment in question, let him be asked what authors have treated the subject, and passages from these writers can be read to any expert with the query, "Do you agree with this statement?" There is much variability in the different courts as to the admission of scientific or medical books, but the wording of the decisions on this point I think would enable a witness to be examined upon statements he had published himself; and if certain writers are acknowledged by the witness as standard, then extracts should be read from those authors and made part of the testimony. If objections are sustained against reading to the witness, the books may be used in the argument to the jury.

Few persons can describe off hand the essentials of a question of disease so fully, lucidly, and in so short a time as does the printed dissertation.

The difference between the subjective symptoms and objective signs must be made clear, and it is astonishing how

many physicians show unfamiliarity with these distinctions when testifying.

An objective sign, symptom, or indication, is one that is demonstrable, independently of the patient's statements.

A subjective symptom is undemonstrable, and requires the patient's description. For instance, the stumps of amputated arms or legs are objective evidences of injury; a depressed skull-bone, a lost eye, or mutilated nose, etc., are also objective; but a headache, pains in general, memory impairment, many forms of intellectual failure and physical debility are subjective, and may be simulated.

A malingerer, in military and legal parlance, is one who pretends to be suffering from a disability, or creates a real disability for purposes of fraud.

There is also the objective manifestation of a subjective condition, such as the frown, the uncertain gait of ataxia, the rigidly maintained spine of Erichsen's disease, and similar indications of disease. These also may be simulated.

Some otherwise subjective states are convertible into practically objective by resort to scientific methods. Thus an alleged paralysis which can otherwise neither be proven nor disproven, may, by electro-diagnosis, be determined positively as false or genuine. But the experts capable of making electrical examinations are not numerous, and to determine whether the witness, is skilled or trustworthy, the attorney should post himself on the principles of electro-diagnosis, but as this requires a great amount of time and study, it would be easier to engage the services of an expert capable of assisting in cross-examination on the subject.

Sleeplessness is often affirmed as one of the symptoms of injury. When the plaintiff states that he suffers from insomnia, if the wife is debarred from corroborating this, then what could be made practically objective rests as subjective. In the hospital where nurses can record the behavior of patients, night after night, testimony to the effect that the patient did not sleep would be all important, and when relatives can furnish similar testimony, the effect would be similar.

Tender spots on the spine, or pain induced by handling alleged "sore" places on the body should be tested by Mannkopf's method (erroneously called Rumpf's test—*Centralblatt für Nervenheilkunde*, June 15, 1889). This consists in the fact that pain induced by pressure upon the tender vertebræ, etc., raises the pulse rate.

General emaciation or diminution in bulk of particular parts, as in atrophy of a limb, tremors or fibrillary twitchings, flushings, rapidity of the heart, excessive sweating, sometimes of one half of the body, cold extremities, blueness of the skin due to imperfect circulation, dilatation of the pupils, and the reflex responses are all objective evidences, and when they exist they tend to increase the belief in the genuineness of such subjective symptoms as pain in the back, tenderness of the spine, sleeplessness, headaches, anæsthesia, analgesia, hyperalgesia, hyperæsthesia, paræsthesia, girdle sensation, pains in general, motor enfeeblement, rigidity of the spine, gait disturbance, paresis, inco-ordination, vertigo, speech disturbance, eye and ear difficulties (in absence of opthalmoscopic or otoscopic findings), taste or smell impairment, bowel or bladder difficulty, bedfast condition, sexual impairment, appetite loss, mental defects, such as memory impairment.

These latter symptoms may be feigned, but an array of subjective symptoms, such as the above, constituting Erichsen's disease, when inquired into carefully by an experienced physician with modern means of diagnosis, it would be almost impossible to simulate. "The harmony of the symptom grouping." as Erichsen states, is such as to diminish the probabilities of fraud.

It is because these symptoms are not properly understood or described that so many unjust verdicts are secured against defendants in spinal concussion cases. Instead of, as has been the rule in certain quarters, denying that it is possible to injure the spine at all, let the symptomatology of spinal concussion be brought out fully, and make the fight on square, truthful, scientific issues, at least by the side that has the rights of the case, and an infinitely better result will be secured, and the chances of establishing the truth will be enhanced. If, however, both sides are willing to contest ignorantly about a scientific matter, or they are dishonest, then let there be complete ignoring of the literature of the subject, and hard swearing witnesses, prejudice against corporations, or other bias, determine the issue.

Physicians who are not willing to acknowledge want of experience in these

cases also often sneer at the books, and dodge expert questions, but it is perfectly right and proper that medical witnesses should be pinned down, not only to the symptom description, but to a detailed account of their methods of arriving at a diagnosis.

With other things equal, the expert who is afraid of the literature is incompetent, or he is on the wrong side, fears that he is, or knows it.

The clumsiness and ignorance sometimes brought out in these matters on cross-examination is pitiable, and when exposed enables the jury to estimate the valuelessness of the medical testimony.

The age is too far advanced to allow *ipse dixits*, pomposity, and owlish assurance to win in court cases against modern exact methods of diagnosis.

Attorneys who are unfamiliar with diagnostic methods are at the mercy of even ignorant practitioners of medicine. Let a disease consist in the grouping of symptoms A, B, C, D, E, F, G. Some of these symptoms may belong as well to other disorders, but with additional symptoms, thus, B, D, G, K, and so on. Now, if instead of A, B, C, D, E, F, G, there is testimony of X, Y, Z, and A, how is the bamboozled lawyer to know what constitutes the real disorder unless he has a competent physician to post him, and the test of competency is not only in showing experience but familiarity with the standard treatises on the subject under discussion.

Diseases are determinable by grouped characteristics capable of analysis and description, and one complaint differs from another as a horse shoe does from a watch, the component parts of either of which may be described.

Insanity is also differentiated into many different forms, and it is no longer justifiable to undertake the care of mental diseases without a recognition of the kind of insanity, the ability to recognize which resides in the decidedly different symptomatology each mental ailment presents.

To the uninformed nearly all insanity is alike, precisely as our arboreal ancestors, even long after losing their fur, tails, and pointed ears, were satisfied with knowing that something ailed the disabled person—he was sick, and all sicknesses were alike in those periods.

The books are worthy of consultation as guides to what constitutes a disease, in spite of the jocular saying that "people do not always get sick according to the books." Nor can every possible legal case be paralleled by precedents laid down in law, and yet the statutes and common law sufficiently generalize and particularize criminal and civil considerations, and in this particular medicine is more scientific than law, for the laws of disease are invariable and universal, while those of the courts are far from uniform. When nature is properly interrogated a better understanding of her laws are obtained, and thus modern knowledge of disease is growing more scientific, demonstrable, and unassailable in many instances. And the means of diagnosis are increasing as well as is the appreciation of the limitations of knowledge, a good instance of which appears in such a decision as that of the Supreme Court of New Hampshire, in State *vs.* Jones (50 N. H.), to the effect that there is no legal test of insanity, every case must be judged by itself, and the insane man must be compared with his former self. The "right and wrong" standards of Lord Hale, and other arbitrary methods of determination were erroneous.

A noticeably uniform statement of relatives, in insanity inquiries is that "he is not the man he was," particularly after head injuries, which yield an occasional case of traumatic insanity. When insanity comes under consideration in court, there should be recognition of the vast differences in symptoms presented by imbecility, hebephrenia, paranoia, hysterical and epileptic insanity, paretic dementia, mania, melancholia, circular insanity, katonia, etc., each form of which has its peculiarities in behavior, duration, severity, amenability to treatment, and with reference to testamentary capacity, responsibility, and necessity for sequestration.

Much has been said and written on expert testimony, and disparagement, just and right, has been freely indulged in, sometimes to the extent of classifying witnesses into liars, d——d liars, and experts.

The truth of the matter is simply that experts in any line are precisely like all other persons, good, bad, and indifferent; honest and dishonest; skilled, learned, or mere pretenders to skill and learning. In this category we may place jurists, mechanical and civil engineers, editors, art-

ists, in fact every one who makes any pretense to special information.

The hoary-headed old liar of a medical expert, who swears to anything his attorney desires, may or may not be well posted in his specialty; but, had circumstance placed this same physician on the bench, he would have developed into one of those scheming, tricky, unjust judges, occasionally found, who cater to public opinion or decide, not by law or equity, but as personal, party, or other interests suggest.

And just as we find thorough-going men of principle among the judiciary, plenty of them, who deserve every confidence, and whose decisions can be relied upon as having been made regardless of any other considerations than those of law and justice, so we may find inflexible men of honor as experts in medicine, who refuse to aid iniquitous cases against corporations or engage with wealth and power against a just claim for damages.

Sweeping generalizations are puerile, and should not be countenanced in an enlightened age. All experts are dishonest no more than all judges are unjust. Tailors and printers are not all drunkards, as unthinking popular expressions assert, and even all preachers are not hypocrites, nor are all lawyers knaves.

To get at the truth of a medico legal issue, an ideal trial would require that both attorneys believed in their side of the case, the judge is impartial and learned, and the witnesses tell the truth. Departures one way or another from this condi tion of things complicate matters, and, so far as the expert is concerned, he may be, in fact, and regardless of mere reputation, learned and honest, learned and dishonest, ignorant and either honest or dishonest, for a well-meaning ass may be too ignorant to know how ignorant he is.

The capabilities of the expert, while largely influencing the proper conduct of a damage suit, deserve no more consideration by the attorney than do those of the attorney by the expert. For instance, a French classification of professional men, particularly jurists, who depend so much upon oratorical readiness, is into those who are *auditaires* and those who are *visuaires;* those who can learn best by what they hear, or by what they read and see generally.

In my experience I recall an eminent lawyer who had to be drilled outside the court room on all the main points; by discussing them, he became master of the general situation. He was an *auditaire.* A suggestion in writing, in the court room, was valueless to him. Another not only preferred to read up on all points, but he was also quick to assimilate a written suggestion at an appropriate period of the trial.

Members of legal firms have sometimes supplemented one another's efficiencies, one partner having developed one, and the other member of the firm another faculty.

Experts known to habitually falsify, may be easily discomfited by being reminded of their contradictory testimony in previous cases; thus, one who, when engaged for a corporation, swore that Erichsen was not an authority on spinal concussion, and at another time when testifying for a plaintiff, made great use of this author, was confronted with his contradictions through attorneys lending one another their records, and the humbug had to resort to a diarrhœa of explanations which failed, however, to explain.

Lawyers can often aid their clients wonderfully, and incidentally help to raise the grade of expert service, by hunting up records of testimony of experts in previous cases.

It is a precept with legal men that the plain truth enables a witness to stand unshaken on cross examination, and an expert witness who has earned the reputation for dealing in truth comes to be respected by bench and bar, and is usually not cross examined to any extent for fear that he will make his case stronger. Judges readily learn who are fair witnesses, and often charge the jury strongly accordingly. In time, a good reputation will profit an expert pecuniarily, for lawyers will bring their cleanest and best cases to him.

Among curiosities of medical testimony I recall the following: In one case a physician stated that a head injury seldom caused insanity, and in another case that it invariably did so.

Another doctor swore that a trace of sugar in the urine constituted diabetes mellitus, and a quantitative analysis was not necessary.

Still another stated that he was an expert in electro-diagnosis, and that it was of great value, and at another time sneered at it as valueless.

One announced himself as an expert surgeon in a country trial on his direct examination, but catching sight of a well known surgeon in the court room, who had been engaged by the other side, on cross-examination concluded that he was not an expert surgeon.

Another physician reversed the definitions of objective and subjective symptoms, insisting that a headache was objective, and a cut-off nose was subjective. Still another stated that a subjective symptom was one that was merely less important than an objective one.

And so instances could be multiplied, *ad infinitum*. It is reasonable to suppose that where powers of observation or regard for veracity has been so little under training, as indicated in these answers, great advantage can be gained over such witnesses by a better instructed lawyer.

In conclusion, I append a few questions which may be conveniently propounded in a large class of medico-legal cases, to medical witnesses of either side.

What is the name of the ailment?

What subjective symptoms did you discover in this case?

What objective evidences of disease did you find?

What methods did you use to ascertain these symptoms?

What authors are considered authorities on this subject?

Describe the symptomatology of this disease upon which these authorities agree?

These few questions will suggest and open up means for asking others, such as will demonstrate whether the witness knows what he is talking about, whether he is sincere, prevaricating or mistaken, informed or otherwise.

The main object of this paper is to secure the admission and decent recognition of medical works in court proceedings, against the interpretations of decisions which apparently exclude them. The books themselves, unexplained, undoubtedly should be excluded, because design or want of knowledge may misconstrue anything, but when a competent witness testifies, then such works can serve as memoranda to refresh the memory of the witness, or to test his information or want of information. The books should be read in connection with the comments of the witness, as properly as models of machinery, maps, or diagrams are allowed in elaboration and elucidation of the claims in a contest.

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SOME OF THE TYPES OF INSANITY IN RELATION TO MEDICAL TREATMENT.[1]

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IN the treatment of insanity we must repress cerebral excitement, induce sleep by which the brain cells are renovated, and restore the functions of the body, which are often disordered in mental disease. In addition to these measures, if we provide cheerful surroundings, new objects of attention and interest, and can induce a healthy train of thought, we shall very often have the pleasure of seeing our patients make a good recovery.

The Varieties of Insanity in Relation to Treatment. — The general practitioner should bear in mind that with him rests a great responsibility, as it is during the early stages of insanity that he, if intelligently informed as to mental disorders, may successfully check their progress or ward them off. He should, therefore, carefully study and recognize every deviation from the healthy mental standard of disease, indicating the necessity for medical treatment and advice, and it is to be hoped that, in the near future, no medical college shall be granted a charter which does not provide a chair for instruction in mental diseases, with especial reference to their early diagnosis, and to the therapeutics of insanity by practical alienists. Of what immense advantage to the profession would it have been had they been able, during the past twenty-five years, to have had the theory and practice of psychiatry expounded to them, both in colleges and in the wards of our insane hospitals by such men as the late Drs. Ray, Kirkbride, Pliny, Earle, and many others, who are sound, practical psychologists and alienists. How can a man, ignorant of the first principles of

[1] From advance sheets, *Mann's Med. Jurisprudence of Insanity.*

psychological medicine, intelligently sign a certificate of insanity consigning a human being, perhaps for life, to an insane asylum? There is no disorder of mind without disorder of brain, and it is the great medical evil of the day that at present, in our medical colleges, very little attention has as yet been paid to the study and treatment of such disorders. The profession and medical students have a right to demand that, as they as medical men will be required by the legislatures of the respective States in which they practice medicine, to sign certificates of insanity, and that as to their care will be committed many in the early, curable stages of insanity, they shall be taught in medical colleges, by a special professor:

1. The healthy functions of a healthy brain; the structures which form the cerebrum; the nerve-cells and nerve-fibers; the neuroglia in which the cells are imbedded, and the blood-vessels and lymphatics. The nerve-cells are gathered together in the great nerve-centers, and, as an electric battery sends the current of electricity along the connecting cord to the electrode, so, in like manner, by means of the nerve-fiber, does the nerve-cell communicate with the organs of special sense, with the sensory ganglia and spinal cord, with each other, and, finally, with nerve-cells of the convolutions of the other hemisphere. The phenomena of healthy minds include sensation, feeling, and consciousness. These the student may study subjectively, and then he will be prepared to be taught objectively.

2. The abnormal functioning of an unhealthy, diseased brain. Respecting the subjective study, the remarks of the great philosopher Seneca are very appropriate, where he says; "What does it profit us to master our appetites without understanding the when, the what, the how, and other circumstances of our proceedings? For it is one thing to know the rate and dignity of things, and another to know the little nicks and springs of action." Seneca also truly said: "Philosophy is the health of the mind. Let us look to that health first," etc. Of such a one (a philosopher) he says: "He studies to fill rather his mind than his coffers. His life is ordinate, fearless, equal, secure. He stands firm in all extremities, and bears the lot of his humanity with a divine temper." I fancy that a thorough study of this great philosopher might not be utterly inappropriate to those who desire to understand and master the hidden springs of human action, and that an acquiescence in his teachings might, by teaching us how to best master our hopes and fears, how to tune our affections and keep ourselves constant to ourselves, how to measure our appetites so as to know when we have had enough, and by making us understand that "the good of life does not consist in the length or space, but in the use of it," operate in the direction of the prevention of much insanity. Seneca was a wise psychologist when he said: "Let us rather study how to deliver ourselves from sadness, fear, and the burden of all our secret lusts. Our duty is the cure of the mind rather than the delight of it; but we have only the words of wisdom without the works, and turn philosophy into a pleasure that was given for a remedy." Could the masses be taught to govern their hopes and fears, their anxiety of thought and their perpetual disquiet, there would soon cease to be an increase of insanity disproportionate to the increase of population, as now exists, and observance of hygienic laws would soon become a matter of habit.

Respecting the phenomena of diseased mind or unhealthy brain function, the student will learn that there may be impairment or cessation of nerve-function, and that this is generally ushered in by sleeplessness and marked nervous exhaustion; that there is a prodromic period, marked by distinct psychic signs, during which period there is a defective generation and supply of nerve-force. He will be taught clinically that there is often an initiatory stage of depression before a maniacal attack. He will also be taught that there is very often cerebral hyperæmia, evinced by a hot head, sleeplessness, cephalalgia, flushed face, and injected conjunctiva. A person may not sleep, or even eat for some days while in this condition. Clinically he will see, in the wards of an hospital for nervous diseases, the gloom of melancholia; the delirium, violence, excitement, and incoherence of mania; and the silly, vacant, meaningless behavior of the patient with dementia. The melancholiac may evince much distress, will be full of gloomy forebodings, will have a great weariness of life, and very likely will have attempted self destruction. He will be told that the patient's bowels are torpid, and that very

likely there is lithæmia. The treatment very likely has begun with an aloetic and mercurial cathartic, and this may have been followed by a course of warm baths and opiates and tonics, and in a few months the insanity, if not hereditary, will have yielded to this treatment, and the patient have returned home cured.

The maniacal patient will be violent in conduct, abusive in language, and angry and wilful, perhaps very obstinate. There will be great restlessness and delusions, and perhaps he may have been homicidal. The head may be hot and the conjunctiva suffused, and the muscular movement violent. Or the head may be cool and the pulse small and quick. In such a case a mercurial cathartic may have been used to prepare the system for further treatment, which may be ether ʒj ; tincture opii ♏. xxx to xl, ter die. Under the influence of this treatment, the patient may have improved rapidly, with good food and plenty of fresh air and occupation. In this case, also, very likely the prolonged warm bath with cold to the head for half an hour daily has been frequently used. The case of dementia with a weak mind, and who has been foolish and irritable, and inattentive to the calls of nature, and mischievous, and whose memory seems quite gone, has been treated by tonics, and perhaps the chloro-phosphide of arsenic in 5-minim doses ter die, and gradually decreased, and perhaps has had croton oil rubbed on the shaven scalp. Under this treatment she may have made a good recovery, particularly if the dementia has followed some exhausting and prostrating disease.

In sthenic mania, the continued warm bath of from half to one hour or more, with cold to the head, the administration of a mercurial cathartic, the induction of sleep, occupation and exercise in the fresh air, and time, will often effect a cure in ap parently very unpromising cases ; while in asthenic cases, stimulants are well borne, and are necessary with tonic treatment. We learn in the wards of an hospital, what is perhaps new to us, that opium is the physiological antagonist to the psychical states of gloom and despair, with suicidal tendencies, seen in melancholia. We also learn that the lucid interval of chronic mania is very far from the recovery it sometimes appears to be, and that the case of reasoning mania, who has committed some crime, exhibits not the slightest remorse such as a sane person would suffer from. That such a patient is very plausible, cruel, treacherous, lies on all occasions, whenever it serves his or her purpose, and always justifies the acts performed and considers them quite praiseworthy. The intellect seems quite acute, and the patient probably roundly abuses those who are working for a cure, and is considered as the mischief-maker of the ward of which he or she is an inmate. No treatment will avail in this case, as there is here a congenitally diseased brain, with a total absence of all moral sense—a true moral imbecility. The feelings and moral sentiments have been affected in this case, the emotional insanity finally taking on a destructive character. This patient will have been the scourge of his or her family from childhood. This is a case of moral or emotional insanity proper, with an exalted emotional condition. The affections and dispositions are perverted. Dementia may appear as the patient advances in years, and the hospital is the only safe and proper place for such a one. Of the various forms of insanity in relation to treatment, we have shown the student the clinical phases of mania, melancholia, dementia, and moral insanity, or reasoning mania.

General Paralysis of the Insane.—We see the general paralytic, or case of paralytic dementia, exhibiting a general and progressive loss of co-ordinating power over his muscles (we rarely see a female with this disease), and exhibiting clinically a mental feebleness bordering on dementia. The poor fellow, who is doomed, probably, for this is one of the most incurable forms of insanity, will tell us that he feels in perfect health, is worth millions, and has other delusions of grandeur. As he is talking, we notice the tremor of his lips and tongue, and, as he walks, we see that his gait is very uncertain. As we look closely at him, we see that his pupils are unequal, but this condition may be present or absent. The motor, sensory and psychical functions generally are performed sluggishly, and paralysis of the sphincters comes on and the patient dies of exhaustion. The patient may have had maniacal attacks during his illness. If he is inclined to be excitable and restless, we may give him a combination of chloral, sodium bromide and morphine, at night, with a pill every two hours of va-

lerianate of zinc and belladonna, and cold baths with central galvanization. This may relieve symptoms very markedly, and, in the early stages, may possibly do more than this, but the prognosis is very gloomy indeed. The evening temperature is always higher than the morning. We may diagnose this disease by the thermometer, as the rise will be seldom less than 1°, and in destructive cases may be as high as 2°, *i. e.*, evening temperature.

Epileptic Insanity.—We find this patient presenting a history like the following: There will be a maniacal attack accompanying the fit, lasting for a few hours, and it may appear again after the fit any time within a few days. There are likely to be instantaneous acts of violence committed by this patient, and especially in non-convulsive cases. The higher the epileptic excitement, the less likely is the patient to be dangerous, as the morbid impulses toward homicide more frequently accompany the milder attacks, where the patient is apparently very mild and tractable. There is an unconsciousness of acts performed, as there is unconsciousness in all true epilepsy. There is vertigo, injection of the conjunctiva, dilatation or alternate dilatation and contraction of the pupils, and a slow respiration. The temperature may be below the normal, except about the time of the paroxysm, when it becomes heightened, as does the pulse. There is, sometimes, a heavy drunken sleep before the return to sanity and consciousness.

It is extremely important, from a medico-legal standpoint, to remember the violence and the unconscious states of epileptics, and the existence of temporary mental disorders occurring after epileptic paroxysms. The mental condition of epileptics has received too little attention. The best treatment in these cases has seemed to me to be a combination of sodium bromide, 30 grains, and fluid extract of ergot, 30 minims ter die, with maltine hypophosphites or cod-liver oil and hydrotherapy and electrotherapy, with attention to the nutrition of the nerve centers. Plenty of muscular exercise is imperative, and where patients are walked six miles a day, there will be marked decrease in the frequency and intensity of the fits. In all cases, much attention is paid, in my sanitarium, to hydrotherapy, electrotherapy, massage, muscular exercise, dietetics and intensive alimentation to the psychic condition and to the nutrition of the nerve centers.

THREE CASES OF CRANIAL SURGERY.[1]

By WILLIAM H. MORRISON, M.D.,
of Holmesburg, Pa.

I. Linear Craniotomy for Defective Mental Development. Report of a Case, Thirteen Months after Operation. Decided Mental Improvement.
II. Exploratory Trephining for Epilepsy. Negative Results.
III. Trephining for Abscess of the Brain. Evacuation of One Ounce of Pus. Recovery.

THE cases which I shall bring before the Society to night, although differing in their pathological characters, are topographically related, and may with propriety be reported together. Each of the cases presents certain instructive points for consideration, and, thinking that it might interest the members of the Society to have an opportunity to examine the patients, I have had them brought before you.

The first case is one of linear craniotomy, an operation suggested some two years ago by Lannelongue,[2] of France, as possibly of service in certain cases of microcephalus and deficient mental development. In the case now reported, thirteen months have elapsed since the operation, and the child certainly shows a decided improvement in its mental and physical condition. The second case is one of epilepsy, in which there were certain somewhat indefinite localizing symptoms. Exploratory trephining was done nine months ago with negative results. The third case is one of abscess of the brain, symptoms of compression of motor areas developing rather abruptly eight days after injury to the head. The skull was at once opened, and an ounce of pus evacuated from beneath the dura mater. The patient has perfectly recovered.

Case I. *Defective Mental Development. Linear Craniotomy at the age of two years and five months. Decided Improvement. Report of Condition at the age of three years and six months.*—The subject of the present report, M. L., male, was born August

[1] Read at the Philadelphia County Medical Society, May 25, 1892.

[2] L'Union Medical, July, 1890.

30, 1888, and has now reached the age of three years and six months. The mother was a primipara. The head presented in an occipito posterior position, the occiput rotating into the hollow of the sacrum. Forceps was applied and the child delivered. There was no apparent injury to the head, but in the course of a few days there formed, as a result of the pressure, a slough back of the left external angular process and one in front of the right ear. Whether or not this had anything to do with the development of mental defect, I am not prepared to say. When the child had reached the age of a few months, it became evident that its mental condition was not up to the average, and, as it became older, this mental deficiency became more observable, and the child presented every appearance of drifting into complete idiocy. In regard to family history, it may be said that the parents are young and healthy, and that there is no known tendency to mental disease or deficiency on either the paternal or maternal side. Two children have since been born and both are normal, mentally and physically.

In December, 1890, I suggested a trial of the operation of linear craniotomy, which had been brought forward a few months previously by Lannelongue. The suggestion was accepted, but the performance of the operation was postponed for four months on account of the expected confinement of the mother. During this time the parents tried every means at their command to educate and improve the mind of the child, but no signs of betterment could be detected.

The operation was done April 17, 1891, thirteen months ago, and a report of it appeared in the New York *Medical Record*.[1] I quote from this report an account of the child's condition at that time and of the steps of the operation.

"Age two years and five months; height, thirty-two inches; length of right leg, fifteen and three-quarters inches; length of left leg, fifteen and three-eighths inches, a difference of three-eighths of an inch; circumference at middle of thighs, eight and one-half inches. The measurements of the head were: occipito-frontal circumference, eighteen and one-half inches; semi-circumference from one external auditory meatus to the other, twelve inches; antero posterior diameter, six and one-half inches; biparietal diameter, four and three quarters inches; bifrontal diameter, three and seven-eighths inches.

"He is able to sit alone but cannot stand. He moves from one place to another by sliding on his buttocks. There is some contraction of the gastrocnemii muscles, so that when he is supported on his feet the body is thrown backward. The grasp of the two hands is equal and strong. The right patellar reflex seems absent, the left normal. There is no apparent paresis or paralysis. He is unable to talk. He can utter a few words. 'Bert,' 'baby,' 'six,' and 'seven' is the extent of his vocabulary, and it is seldom that he can be induced to say even these words. He cannot understand what is said to him. His only means of indicating that he wants something is by crying, and it is only by offering him various articles that it can be determined what he desires. His attention can be gained with difficulty, and when gained can be held but for a moment. He does not show that he understands when his name is called. Almost every day he has, without apparent cause, spells of crying, without tears, which will continue for two or three hours. When pleased, he shows it by a broad, idiotic smile. He eats fairly well and is well nourished. There is no incontinence of bladder or bowels.

"*Operation.*—The head was shaved and the usual antiseptic precautions adopted. An incision was made through the scalp, beginning at the line of the hair, two inches above the superior edge of the left orbit, and extending backward eight inches, parallel with the median line and one inch distant from it. Bleeding was controlled by hemostatic forceps. During the early part of the operation, a rubber tube was placed around the head to prevent bleeding, but it was found unnecessary and was laid aside. A one-half inch trephine was applied at the anterior extremity of the wound, its center being three-fourths of an inch from the median line, being so placed that the section in the bone would not correspond with the incision in the scalp. The button of bone removed was one-sixteenth of an inch in thickness. With the rongeur forceps, as modified by Dr. W. W. Keen, a strip of the skull three-eighths of an inch wide was removed, beginning at the trephine opening and extending backward seven inches, parallel with the median line and

[1] July 18, 1891.

half an inch distant from it. The dura mater appeared healthy and was not markedly adherent. Bleeding from the bone stopped spontaneously and no ligatures were required for the scalp vessels. The wound was thoroughly cleansed and united by numerous silk sutures. A few strands of catgut were placed at each extremity of the wound for drainage and a moist bichloride dressing applied."

For a day or two following the operation there was some fever and signs of cerebral irritation. Removal of the dressing showed that the difficulty was due to the fact that the posterior extremity of the wound was occluded, the catgut failing to act as a drain. The catgut was then removed and a short rubber drainage-tube substituted. Following this the recovery was uninterrupted, all parts of the incision, save the posterior extremity, uniting by first intention. Two weeks after the operation, the wound was completely healed.

As soon as the patient had recovered from the direct effects of the operation, it became evident that there was a change in his mental condition. His attention could be engaged readily, and he would follow the speaker with his eyes. Within a few weeks he was able to indicate food or drink by pointing toward the desired object and began to pick up new words. The mental improvement has been continuous.

May 22, 1892, the condition is as follows: Age three years and six months; height, thirty-seven and three quarters inches, a gain of five and three-quarters inches; length of right leg, seventeen and one-quarter inches; length of left leg, sixteen and three-quarters inches, a gain of one and a half inches; circumference at middle of right thigh, eleven inches; of left thigh, ten and a half inches, a gain of two inches. The measurements of the head are, occipito-frontal circumference, nineteen inches, a gain of one-half inch; semi circumference from one external auditory meatus to the other, thirteen inches, a gain of one inch; antero-posterior diameter, six and three-quarters inches, a gain of one-quarter inch; biparietal diameter, five inches, a gain of one-quarter inch; bifrontal diameter, three and seven-eighths inches, no gain. The incision through the bone which was made three-eighths of an inch in width is now not more than one-eighth of an inch in width. In studying the measurements of the head, it will be noted that while all the dimensions have been increased, the greatest gain has been in the semi-circumference from one auditory meatus to the other, amounting to one inch. As the biauricular line represents two thirds of the circumference of the skull at this point, an increase of one inch in the length of this line would correspond to an increase of about one-half inch in the diameter, but as the biparietal diameter shows an increase of only one-fourth of an inch, it appears clear that the skull has expanded more vertically than laterally.

While the nutrition of the muscles of the lower extremities has improved, there is still decided want of development. He climbs up by chairs, and stands indefinitely. He will follow the chair as it is moved, and will walk if supported by the hand, but his gait is very unsteady. He can stand alone and has done so for half a minute at a time, but is in great fear of falling. He has been found half way up a steep stairway. He listens attentively when spoken to, and seems to understand what is said to him. He protrudes his tongue or offers his hand when asked. When lying down, if told to get up, he does so. He knows what he wants and asks for it. He has acquired many words and puts them together intelligently in short phrases and sentences. On parting, he waves his hand and says "Good-by." He plays with other children and seems to enjoy himself. The annoying, unmeaning crying spells, which were of daily occurrence prior to the operation, have not since occurred.

It is certain that in this case the operation has been followed by decided improvement in the mental condition. The question, of course, arises whether this is the result of the operation or simply a sequence. Although I approached the operation with considerable skepticism, I believe the change noted is the direct result of the operative procedure, and the principal reason for this view is, that for four months after the operation was decided upon, the child was kept under observation and every effort made to improve it by education. At the end of that time there was no apparent change; but within a few months, and in fact within a few weeks after the operation, the other conditions remaining the same, there was a distinct and positive improvement. It,

therefore, seems fair to assume that the operation was the cause of the change. I do not mean to claim that this operation will be followed by benefit in all cases. I simply report the facts as I find them in this instance. It may be that the operation is not indicated in many cases of defective mental development, for, as I have said in the article already referred to: "It does not seem logical to suppose that this procedure will benefit a large proportion of these cases, for in many of them there is probably more than a relative disproportion between the development of the brain and its bony covering; but, even if a small number be reclaimed from utter idiocy and be permitted even a moderate intellectual development, it is so much gained, and would justify a procedure attended with much greater risk to life than is linear craniotomy."

This matter has been studied, particularly from a neurological standpoint, by Dr. M. Allen Starr, of New York. In a recent paper[1] he takes the same view as that just expressed. He says: "Hemiplegia, sensory defects, and imbecility occurring with or without epilepsy in children, are chronic diseases incurable by medical treatment. Any means which may be legitimately used to save the individual from a life of invalidism, and to take the burden of his care from the family is to be employed." Dr. Starr has collected reports of twenty-five cases, eighteen of which, including two of his own, were operated on in this country. Of this number, seven died within a short time after operation. In the remaining eleven cases improvement is noted, but the period at which the reports have been made has been too short to warrant any definite deductions. The determination of the value of linear craniotomy is still a question for the future.

Case II. *Exploratory Trephining in Epilepsy, with Negative Results.*—In the early part of 1889, G. G., white, male, aged eight years, came under my observation, with the following history: The parents were living and healthy. The mother had suffered from *petit mal* in childhood, and had had occasional attacks of major epilepsy at intervals of one or two years. When two years of age the child had a convulsion without apparent cause, but promptly recovered. At the end of three months he had a second spasm, and after another interval of three months, he had a third. There had been no more convulsions, but when four years of age he began with attacks of minor epilepsy. Under treatment these disappeared for nine months, but then returned and have remained until the present time. In these attacks there is sudden loss of consciousness without aura, accompanied by rhythmical contractions of the muscles of the face and arms and swaying of the body, but the boy does not fall. In a few seconds he recovers consciousness, and resumes the occupation that has been interrupted. These attacks may be repeated one after another until he has had ten or twelve within a short time. They are especially frequent on rising in the morning, and scarcely a day passes without his having from ten to twenty of the mild seizures.

The lad was placed on the use of bromides, antipyrin, and other agents, without apparent improvement.

In the latter part of 1889 attacks of major epilepsy made their appearance, and recurred at irregular intervals, varying from two weeks to two or three months. These paroxysms were ushered in by a peculiar sort of moan, and were marked by complete unconsciousness, general convulsions, frothing at the mouth, and occasionally by biting the tongue. Ordinary treatment seemed to have no effect. The patient had some phimosis, with adhesions between the prepuce and the glans, and, at the request of his parents, I did circumcision, although expressing the opinion that it would not afford relief. This operation had no influence upon the attacks. He still continued to have daily attacks of *petit mal*, with occasional severe paroxysms.

At this time the parents were instructed to observe the major attacks carefully when opportunity was presented, and to note whether or not the spasm began in any particular part, or was limited to any set of muscles. This was done with the result that in all of the attacks where the commencement of the paroxysm was observed it was found that the face and head were drawn markedly to the right, and remained so throughout the attack.

On December 2, 1890, the head was shaved and examined carefully for the presence of scars. None were found, nor was there any history of injury to the

[1] *New York Medical Record*, January 23, 1892.

head. In a seizure noted December 7, it was observed that the spasm was most severe in the right arm and leg, the face and head being drawn to the right as usual. During the early part of 1891, the paroxysms continued to recur, gradually increasing in frequency, so that in July he had five attacks.

The continuance of the epileptic seizures uninfluenced by treatment, their increasing frequency, and the presence of certain localizing symptoms, seemed to warrant exploratory trephining, with the view of ascertaining whether or not there was any lesion involving the centers, for rotation of the head and face.

The situation of the centers for rotation of the head and face to the opposite side has not been definitely limited, or rather it may be more correct to say that these movements have a wide representation. They are located by Horsley and Ferrier in the posterior portion of the middle frontal convolution, thence probably extending upward into the superior frontal convolution. It was, therefore, decided to make the opening over the posterior portion of the middle frontal convolution, and to extend it upward, as seemed advisable. The position of this convolution is readily located. Posteriorly it is separated from the ascending frontal by the precentral or vertical sulcus, which runs parallel to the coronal suture and just behind it. Below, the second frontal gyre is bounded by the inferior frontal sulcus, which leaves the vertical sulcus beneath the junction of the superior temporal ridge and the coronal suture (the superior stephanion).

The operation was performed August 29, 1891, nine months ago. The day preceding the operation the head was shaved, thoroughly scrubbed several times with soap and water, and finally washed with ether, and a moist bichloride dressing applied, the position of the parts involved having been first located and marked with ink. As the intention was to enlarge the opening in the skull upward as needed, the flap was cut with its base upward. A half-inch trephine was applied just above and in front of the point where the ridge for the temporal fascia crosses the left coronal suture, and a disc of bone three-sixteenths of an inch in thickness removed. With rongeur forceps this opening was enlarged upward a distance of two inches, parallel with the coronal suture, the suture being included in the section. The opening in the bone was about three-fourths of an inch in width. The hemorrhage from the divided bone was free, but was controlled with hot water. The dura, which presented a normal appearance externally, was then opened, but no evidence of local trouble was discovered. The electrodes connected with a faradic battery were then applied to the convolutions at various points, but no response was elicited. During the operation nothing but simple boiled water was used. The dura was closed with catgut sutures. The fragments of bone, which, during the operation, had been preserved in warm boric acid solution, were now replaced. The flap was then adjusted and stitched with silk, a short rubber drainage tube being placed at the posterior angle of the wound, and a horsehair drain laid across it. A moist bichloride dressing was applied, and the patient returned to bed.

There was no marked shock, and the patient reacted well. Twelve hours later the dressing, which was found saturated with serous fluid, was renewed and the drainage-tube withdrawn. The horsehair drain was allowed to remain for three or four days. Healing by first intention was perfect, save at the points where the horse-hair drain emerged. There was no suppuration. Following the operation and during the healing of the wound there was no elevation of temperature, and, in fact, no unfavorable symptoms of any kind. It was with difficulty that the boy could be kept in bed, and if vigilance were relaxed for a moment he would be out of bed, with his head out of the window, calling to playmates on the street.

Immediately following the operation there was decided improvement, as is the usual history in all operations for epilepsy. For two weeks the minor attacks, which he had been having with great frequency daily for years, almost entirely ceased. They then began to appear again, and soon became almost as frequent as before. The first severe attack occurred September 20, three weeks after the operation. In this spell it was noted that the head was drawn to the left instead of to the right. The attacks have since been repeated at about the usual interval of from two to four weeks, but it should be noted that in the paroxysms observed since the operation the face and head have not been drawn

to either side. For several months after trephining no internal treatment was employed, in order that the effect of the procedure might be determined. The use of bromides was then resumed, and these agents seemed to exert a more beneficial effect than before the operation. The combination of antipyrin with the bromide was tried, but it seemed to act no better than the bromides alone.

CASE III. *Abscess of the Brain Following a Blow upon the Head, with Fracture of the Internal Plate of the Skull; Hemiplegia Appearing Abruptly Eight Days Later; Trephining; Evacuation of One Ounce of Pus from Beneath the Dura; Recovery.*—On February 25, 1892, I was called to see Mrs. S. L., white, aged thirty-nine years, the statement being that her scalp had been cut. She with two others had been drinking, and in a row that followed she had received the injury. I found a cut through the left side of the scalp, one and one-half inches in length, parallel with the Rolandic line, and one inch in front of it. The upper extremity of the wound was one inch from the median line. Immediately beneath this wound, and corresponding to it in length and position, was an injury to the bone, as though it had been cut with an edged instrument. This cut was one-fourth of an inch posterior to the coronal suture. There was no fracture of the external plate, and a probe passed into the cut in the bone did not seem to penetrate beyond the diploë. There were no symptoms of brain injury. The patient had not lost consciousness, although the blow had forced her against the wall.

I felt that it was very probable that the internal plate had been fractured, and considered the advisability of immediate trephining; but, as the woman presented no symptoms, and it being late at night, and as I was separated from assistance by three miles of muddy roads, I decided to postpone operative interference and await the development of symptoms. The wound was thoroughly cleansed with bichloride solution, approximated by one suture, and an iodoform and corrosive sublimate dressing applied. The attendants were directed to watch the patient carefully, and to notify me at once if there were observed any twitching or weakness of the muscles of the right side. That night there was some nausea and vomiting, which continued during the following day, and then ceased. During the next three or four days the patient did well, there was no fever and no change in the pulse, and I began to think that had I trephined I should have made a mistake. On the third or fourth day the patient commenced to complain of severe pain in the left temple. She, however, slept well at night and rested comfortably during the day, and as I knew, from previous experience, that she was not in the habit of minimizing painful situations, I did not attach as much importance to this symptom as I might otherwise have done. She was kept quiet in bed, and bromide of potassium administered. The bowels acted regularly under small doses of laxatives, and the vomiting and nausea did not recur.

March 3 (seventh day). There was no change in her condition. She still complained of the pain in the temple. The pulse was normal, the temperature as taken in the mouth was not above normal. The wound was carefully examined but there was no suppuration. The scalp seemed a little puffy at the position of the injury and the edges of the wound. The latter had united and I separated the edges with a probe, but no pus was present. The wound was then redressed. The following day, March 4, I did not see her.

March 5 (ninth day). I saw the patient at 9 A. M., and was told that the previous afternoon she had begun to lose power in the right arm and leg, so that she had to be assisted in and out of bed. When I saw her, she was in a semi-stupid condition, with no delirium and no convulsive movement. There was complete paralysis of the right arm and leg, the right side of the face and tongue, and thick, indistinct speech. I ordered the head shaved and scrubbed, and at once made preparations for opening the skull.

The operation was done at noon. The patient was slightly etherized, and a flap three inches wide, with its base downward, and its apex corresponding to the upper extremity of the scalp wound was turned back. For three-fourths of an inch on each side of the wound in the skull, the periosteum was found separated from the bone, but no pus was present. A half-inch trephine was applied immediately in front of the middle of the bone injury, and a disc of bone one-fourth of an inch in thickness removed. It was then found that the internal plate had been separated

from the external plate for half an inch on each side of the cut. With rongeur forceps the whole of the seat of fracture was removed, leaving an opening one and one half inches in length by one inch in width. The dura protruded into the wound and slight pulsation was observable. The membrane was covered with inflammatory exudate, in which were imbedded fragments of the internal plate. At the upper part of the opening was a small, dark, extra-dural blood clot, about three fourths of an inch in diameter. There was no sign of suppuration external to the dura. The fragments of bone were then picked away with forceps. One of the fragments seemed to have penetrated the dura, and in drawing it away an opening was made in the membrane, through which escaped about one fluid-ounce of yellowish green pus. The opening in the dura was then enlarged, care being taken not to separate the adhesions which had formed between the dura and pia mater, and thus open up new areas for infection. The cavity of the abscess was found to be one and a half inches in depth. It was carefully washed out with plain boiled water, and a rubber drainage-tube was inserted. The liquid left in the abscess cavity could be seen distinctly ris ing and falling in the drainage tube with each pulsation of the brain. The flap was then replaced and secured with silk sutures, the drainage tube being brought through the original wound. The scalp was thoroughly irrigated with corrosive sublimate solution and an iodoform and bichloride dressing applied.

5 P. M. of the same day she was resting quietly. The pain had disappeared. There was no nausea. She could speak a little more distinctly, and replied intelligently when spoken to, although still somewhat dull.

9 P. M. Condition the same. Temperature normal; pulse, 80 per minute.

During the week following operation the condition continued satisfactory. The temperature, which was taken twice daily, at no time went above 98.6°. The pulse ranged from 70 to 80 per minute. There was no pain. The wound was dressed at intervals of two or three days, and at each dressing was washed out with a solution of peroxide of hydrogen. There was lit tle discharge from the abscess, and the drainage-tube was gradually shortened. During this period, while apparently rational on most points, she presented some delusions, the principal one being that she was detained on a boat away from home.

By March 12 the paralysis had nearly disappeared from the muscles of the larynx and face. The tongue was protruded nearly straight. At this time there was slight movement of the thigh muscles when the leg was pinched. There was no anæsthesia at any time. The stitches in the flap were now removed and primary union found throughout the wound, with the exception of the point at which the drainage tube emerged.

The patient continued steadily to improve, and on March 23 the following note was made: "The abscess cavity is almost entirely closed, and the drainage-tube was removed. There has been no discharge for some time, and a short tube has been retained simply to keep the external wound open as a matter of precaution. The paralysis of the tongue has disappeared. The voice is almost normal. The appearance of the face is natural. The thigh and leg muscles have been steadily gaining in power. She can move the foot and draw up the leg when bidden. No movement of the muscles of the upper extremity can be detected."

March 24. The use of faradism to the arm and leg was begun, and the current induced decided contraction of the muscles.

March 26. She is able to flex and to extend the fingers.

March 31. She is able to be out of bed and to walk across the room without support. The arm movements are increasing in force. The drainage-tube opening has closed, but there is a distinct depression of the scalp at the seat of the abscess. The mental condition is normal, but she is easily excited.

From this time she steadily improved and gained in strength, and has now practically returned to her normal condition.

A study of this case offers several interesting and instructive lessons. In the first place, it forcibly illustrates the danger of delay. The trephine should have been applied at once, for although there was no fracture of the external plate, but simply an incision extending through it to the diplöe, yet the character of the wound rendered it almost certain that the internal plate had been fractured. I recognized the advisability of immediate trephining, and have to offer in palliation

for the sin of omission only the facts before stated.

The absence of symptoms, although not unusual, is of interest. Dr. Chas. B. Nancrede,[1] in a paper on "Surgical Interference in Cerebral Abscess," in speaking of this condition, says: "Mental hebetude, slow pulse, headache, perhaps rigor, subnormal temperature, constipation, and at the end sudden development of the compression symptoms, as evidenced by profound coma, hemiplegia, respiratory failure, and death, seemed to have in all cases marked the occurrence of brain abscess." In this case, prior to the appearances of the signs of compression of motor areas, there was an absence of all symptoms noted above, with the exception of the pain and the non-elevation of temperature. I regret that the exact temperature was not recorded; it is simply noted that the temperature was not above normal. Dr. Nancrede, in the article referred to, lays stress upon subnormal or normal temperature as a diagnostic feature of abscess involving the cerebral tissue, saying that "where high temperature is noted, either the pus collection is a localized suppurative arachnitis, or there is meningitis in addition to the abscess."

The position to which the pain was referred corresponded very closely with the situation of the abscess, although Dr. Spitzka[2] states that "the pain is sometimes localized, but the subjective localization does not correspond to the actual site of the morbid focus."

The abscess in this case was situated just anterior to the middle of the ascending frontal convolution, and, as would naturally be supposed, the chief brunt of the pressure fell upon the centers for the upper extremity, while those for the leg and those for the face were not so seriously implicated. The muscles of the face, tongue, and larynx began to regain their power within a short time after the pressure was relieved. Motion in the muscles of the leg was first observed at the beginning of the second week, but three weeks elapsed before voluntary movement reappeared in the arm.

So far as I am aware this is the second case of recovery after treatment for cerebral abscess to be recorded in this city. Dr. D. Hayes Agnew,[1] in his paper on "The Present Status of Brain Surgery," read before the American Surgical Association at its last meeting, collected from the practice of surgeons of this city, eighteen cases of trephining for abscess of the brain following traumatism, aural disease, and syphilitic necrosis, and says, "All the patients died, life in no instance being prolonged beyond fourteen days." Looking over the literature relating to cerebral abscess in this city, I found that on November 7, 1888, Dr. Thomas G. Morton[2] had reported to the College of Physicians a case of trephining for abscess of the brain, and at that time the case presented every prospect of recovery. On inquiry from Dr. Morton I learn that the case eventually made a perfect recovery, but that in sending to Dr. Agnew a list of his cases this one was accidentally omitted. The history of Dr. Morton's case is briefly as follows: The patient was a colored boy, ten years of age, who had received a lacerated wound of the scalp, which was cleansed and closed, and the boy sent to the Pennsylvania Hospital, September 29, 1888. The wound suppurated freely, the boy became delirious, and there were symptoms of compression. Dr. Morton's attention was then called to the case. The skull was exposed and a stellate fracture of the temporo-frontal region discovered. The trephine was applied and a number of pieces of separated bone removed. An incision carried into the bulging brain mass, evacuated about an ounce of pus and broken down blood clot. The dural incision was then increased, and disorganized brain substance and disorganized clot removed with the dull curette. The wound was closed, drained, and an antiseptic dressing applied. Convalescence was rapid, and the patient was discharged thoroughly recovered on January 4, 1889.

In conclusion, I desire to express my indebtedness to my friends, Dr. H. A. P. Neel and Dr. E. E. Keiser, for valuable aid and counsel, and to my brother, Fred. S. Morrison, for much assistance in connection with these cases.

DISCUSSION.

Dr. John Amherst, Jr.: In regard to the case of linear craniotomy, the patient

[1] Transactions American Surgical Association, 1884, vol. iii, p. 94.

[2] Pepper's System of Medicine, vol. v, p. 795.

[1] Transaction American Surgical Association, 1891, vol. ix, p. 24.

[2] Transactions College of Physicians of Philadelphia, 1888, vol. x, p. 447.

seems to have been much improved, and to be much better now than at the time of operation; but it should always be remembered, as was very justly pointed out in the paper, that we must not invariably take the improvement after operation to be improvement from the operation. Those who have seen many cases of mental deficiency are aware that the patients will improve greatly under improved hygienic conditions and systematic efforts to educate them. I have twice conversed on this subject with Dr. Kerlin, the Superintendent of the Asylum for Feeble-minded Children, at Elwyn, and he tells me that he has in his institution several children who have been operated on by linear craniotomy, and that he is not convinced that the improvement has been greater than that which might have been obtained under proper care and training without operation. I have not had occasion to perform this operation myself, but have had charge of one patient on whom the operation had been done by another surgeon. The child was brought to the Children's Hospital six or seven months after the operation, and, certainly if it was more idiotic before operation than when admitted to the hospital, it must have been in a very bad condition, indeed. It was a typical microcephalic idiot. The nurses took a great deal of interest in this child, and, under the care that they gave it, it certainly did improve in the few months that it was in the hospital. As far as my experience goes, I have not seen anything to convince me that this operation has a very wide field of usefulness. I have not yet seen anything to make me believe that the prospective benefits of the operation justify the acceptance of the risks which undoubtedly accompany it.

In regard to the operation for epilepsy, my own experience has been limited to cases in which there was a history of traumatism, and in which there was reason to think that the disease might have resulted from some injury. I have seen improvement in these cases, and, occasionally, very marked improvement for a time, but I believe that eventually in every case the convulsions have returned. I think that it is the experience of most operators, that, while benefit may be secured for a time, the ultimate results of operation are not as successful as could be desired, and this even in traumatic cases where there is reason to believe that there is a local lesion. When the operation is done on general principles, so to speak, the prospects of benefit are still less. It is true, as Dr. Morrison has remarked, that any operation may be followed by temporary improvement. Epilepsy may be cured for the time being by setting the house on fire. Any shock or decided impression upon the nervous system will temporarily effect a cure of the epilepsy, but the cure is not permanent. This has always seemed to me the great difficulty in regard to these operations. It is so difficult to say how much benefit is due to the operation as an operation, and how much is due to the general effect upon the nervous system which might be produced in many other ways.

The case of abscess of the brain is one of great interest, and while it is exceptional in Philadelphia surgery to have a successful result, yet the records of surgery all over the world show the operation to be more successful than we have found it here. Some years ago I collected over one hundred cases of operation for cerebral abscess, and the number now considerably exceeds one hundred. In about one-half of the recorded cases recovery is said to have been obtained. I do not mean to say, however, that the prospects of recovery are 50 per cent., for doubtless many of the fatal cases have not been reported.

I have not been so successful as to obtain a complete recovery after evacuation of pus from the brain, although I have given great relief and prolonged life in several cases of suppuration following either traumatism or disease of the ear.

In regard to the remark that was made, apologizing for not having operated earlier —I am sufficiently conservative, using the term in what I consider its proper sense— to think that there was here nothing to apologize for. It must not be forgotten that there is strong reason to believe that a large number of persons recover without any evil consequences after fracture of the inner table of the skull. It was regarded by Strohmeyer as a fortunate thing for the patient that when the inner table was broken the external table often escaped; for he said that if the external table gave any evidence of fracture the surgeon would trephine, and the patient would probably die, whereas, if there were no fracture of the external plate, although the inner table might be broken,

the trephine would not be used, and the patient would probably recover. This clinical observation of Strohmeyer's is of some value even at the present day. I have seen a number of cases of recovery after head-injury, in which I had little reason to doubt that there was a fracture of the inner table, and I have seen specimens where there was every reason to believe that there had been such a fracture, though the patients had recovered and had lived many years. It does not follow that because a person has such an injury he is necessarily going to have an abscess of the brain, or that the case is going to terminate fatally. If there is any reason to think that there is a connection between the external air and the brain lesion, I think that operation should be resorted to. Where, however, the lesion is subosseous, where there is no opportunity for the entrance of deleterious germs, it is well to postpone operation. Thus, in cases of impacted fracture, even if both tables are broken, recovery will often occur without operative interference. If the fracture is unimpacted, with access of air, it is better to remove or elevate the broken fragments, and secure free drainage from the parts below.

The position which I take, therefore, is that where there is an impacted fracture, with no communication between the external air and the seat of internal injury, the patient will often get well without any trouble, and under these circumstances it is not advisable to trephine. In cases, however, where there is reason to believe that there is communication with the atmosphere, it will be proper to trephine. I might here refer to an interesting clinical observation made by Dr. Nancrede, in a case in which he was led to recognize the existence of a fissure penetrating the skull by the presence of a hair caught in the fissure, showing that there had been a solution of continuity.

Where symptoms come on which lead the surgeon to think that there is pressure upon the brain from pus, trephining is proper, and under these circumstances I have resorted to operation in several cases. Where, however, there is no reason to believe that there is pus within the skull, or where there is a question between meningitis and suppuration, the surgeon will often do wisely not to interfere.

There is a statistical point which I shall mention, although it is not well to place too much reliance upon statistics. The operation of trephining differs from most other operations in the fact that the secondary operations are more successful than the primary. If it is possible to postpone trephining until the secondary stage, there is a better chance of recovery than if the operation is done in the primary stage. In this respect trephining differs from other operations, such as amputations and excisions, where the primary operation is the more desirable. Therefore, I think that in a case of this kind we should not regret that the operation was not done primarily, unless there were symptoms manifestly indicating it. Where there is no reason to think that there is communication with the external air, where the fracture does not involve the external plate, or even where it does, if the fracture is an impacted one, it is better to delay operative interference.

Dr. Charles K. Mills: In reference to the first case, that of linear craniotomy, I may say that I have seen one operation of this sort, and have had two similar cases in which ordinary trephining was employed for the relief of the mental condition. In neither of the cases was any good result obtained. It seems to me, as has been said by both of the speakers who have preceded me, that the number of cases in which benefit will be obtained by this operation is extremely limited; still there may be such a small remainder. It is a mistake to suppose that we can, as a rule, do anything by operation for arrested cerebral development, when that arrested development is not dependent upon arrest simply of the bony case or other mechanical obstruction to development. In most of the cases, and the present case seems to belong to this class, the condition present is one of a degree of the so-called porencephalus, or localized arrest of development of the brain. This patient has apparently some spastic condition of the arm on one side, and some want of power, and possibly a slighter spastic state of the leg, of the same side. He also has the peculiar appearance of the head and countenance which is present in the majority of these cases. I have no doubt that the record of improvement is correct, but, it must be remembered, that this patient was two and a half years old when the operation was done, and that

he is now three and a half years old, and, as has been stated, at this age, such cases do sometimes undergo a certain amount of improvement through education.

The few cases in which the operation will do most good, seem to be those in which for some mechanical or other reason, at the time of birth or afterward, premature closure of the sutures take place, or in some way the brain which would otherwise develop is arrested by the bone.

With reference to the second case I shall refer to only one point. I shall say nothing in general as to the operation of trephining for epilepsy, as I have often expressed my view on that point. I shall speak only in regard to one of the guiding symptoms in this case for the site of the operation. If any one so called localizing symptom cannot be depended upon as a guide for operation, it is that of rotation or conjugate deviation of the head. I have pointed this out on two or three occasions. This rotation is of exceedingly frequent occurrence with monospasm or localized spasm of any kind in any part of the body. Conjugate deviation of the head to the right may take place when the signal symptom in the arm or leg is on the left, or it may take place when it is on the same side. Physiological reasons for this exist in the commissural association of other centers with the centers concerned in this motion, and in certain commissural associations in the pons.

As far as the case of brain abscess is concerned, I have nothing to say, as it is in its surgical aspects that it should be discussed.

Dr. John B. Roberts : The third case is of especial interest to me on account of the delay in trephining. I was taught that a punctured fracture should be practically always trephined. I am aware that this differs from the view of Dr. Ashhurst, but it was the teaching under which I was brought up. I am sure that Dr. Ashhurst and the Society will pardon me if I criticize the position taken by Dr. Ashhurst. A punctured fracture is one in which there is a concentration of the force upon such a small area or line as would be liable to break the internal table more than the external. This seems to have been the kind of a case presented to-night, and the kind of a case which the subsequent history shows that it would have been better to have operated on at once. We had here a woman struck on the head, the force being concentrated in a small area, the blow presumably a hard one and in a region of the skull not very thick ; and we would naturally expect that there would be a good deal of breaking of the inner plate. In this case, if there had not been pus infection, there probably would have been developed in a few years epilepsy from the irritation of the dura mater. It may be remembered that some months ago I reported to the Society two cases in which there were somewhat similar fractures caused by localized accentuated force with very little external trouble. One was the case of a man struck by a beer mug thrown across the room. There was simply a little dent in the bone externally, looking like the point of exit of a vein, still a large piece was broken from the internal plate. The man died from delirium tremens in perhaps less than twenty-four hours. If he had lived, I believe that he would probably have had secondary epilepsy. The second case was that of a man struck in the temporal region by a hinge or bolt projecting from a falling iron door. He had never received any treatment. After several years he came to me with defective mentality and frequent epileptic seizures. On laying back the scalp, I found a dent in the external table and a button shaped projection of the internal table which had resulted from the formation of callus around the radiating lines of fracture. If the man had been trephined at the time he was struck, he probably would have been saved his epilepsy and deterioration of mind.

It seems to me that in ordinary cases of punctured fracture the safest thing is immediate aseptic or antiseptic trephining ; first, because of the possibility of pus infection, and secondly, because if it is not done, the patient runs a grave risk of secondary epilepsy. Immediate aseptic or antiseptic trephining adds almost nothing to the risk if done at a proper time and in proper hands. I admit there are at times reasons which will warrant the postponing of the operation. I recall the case of a negro struck on the back of the head with a brick. There was one of these punctured fractures. I hesitated to trephine and did not trephine. The patient recovered, and, as far as I know, never had any secondary epilepsy, though his later history is unknown. I argued in that case that the man was struck on the

back of the head where the bone is thick, that being a negro his skull was probably thicker than usual, and that as the fracture was near the torcula Herophili, the danger from operation was perhaps greater than the risk of allowing the man to go without trephining. Had he been a white man, and the blow at some other part of the skull, I should certainly have operated.

Dr. Samuel D. Risley: As pointing to the value of primary operation in these cases, it may be of interest to mention again a case I reported at the College of Physicians some months ago. A man had been struck by a brick above the occipital protuberance, which caused a depressed fracture of the skull. He was admitted to the Jefferson Hospital, trephined by Dr. Keen, and later discharged apparently well. Four months later he was admitted to the Wills Hospital with optic neuritis and other symptoms. He soon became comatose; the urine was loaded with albumen and casts. He died, and at the autopsy held by the coroner, a very large abscess was discovered at the site of injury to the skull, lying above the tentorium. In this case a primary operation had been successfully done, relieving promptly the pressure-symptoms, but the septic germs had remained.

To Relieve Headache.—Weiss (*Prager med. Wochenschr.*, No. 15, 1892, p. 159) has observed that temporary relief from headache could invariably be afforded by pressure upon the abdomen at a point midway between the umbilicus and the ensiform cartilage, the mechanism of which is thought to be dependent upon compression of the aorta.—*Med. News.*

A curious example of applied science has just been recorded by Mr. Marmaduke Sheild. A plumber, while carrying a pot of molten lead, fell, and some of the liquid metal splashed into his ear, causing indescribable agony, as may well be imagined. After the immediate effects of the injury had passed off, it was found that the metal had burst through the tympanum and filled the tympanic cavity, the surface of the lead being just flush with the remains of the drum. It had also penetrated the Eustachian tube and the various depressions in the middle ear, so that removal by the ordinary means was impossible, so tightly impacted was the mass, in spite of the most patient and persevering efforts. It then occurred to the ingenious operator to try the effects of solvents, and mercury at once suggested itself as a possible agent. Experiments having satisfied him of the feasibility of the process, a quantity of metallic mercury was introduced into the ear, and retained there for some time. Altogether the treatment was kept up for about sixteen hours, and the success of the experiment was soon testified to by the escape of some of the mercury along the Eustachian tube. Ultimately, an energetic syringing brought away, first, some of the *débris*, and then the mass itself. Mr. Sheilds may with justice congratulate himself and his patient on the success of his ingenious plan of treatment.

—*Hospital Gazette.*

A Displaced Abnormal Kidney with Six Renal Arteries.—Dr. Shepherd presented the following interesting report to the Montreal (Canada) Medico-Chirurgical Society, reported in the *Montreal Medical Journal:* This specimen was found in the left side of a female subject. The kidney was an abnormal one, with an anterior hilum; its lower end was situated near the commencement of the internal iliac artery, the hilum being opposite the bifurcation of the aorta. It received two arteries from the abdominal aorta, two from the common and two from the internal iliac arteries; these vessels entered it on the internal border from the superior to lower end. One artery of large size, however, wound round beneath the kidney and entered its convex external border. This vessel came from the internal iliac, and was opposite the hilum. The veins were also multiple. The supra-renal capsule was in its normal position, and did not descend with the kidney, being separated from it by several inches. The right kidney, although normal in position, was supplied by three arteries. Dr. Shepherd remarked that multiple renal arteries occurred in his experience in about 10 per cent. of subjects, and were due to a persistence of the primitive condition, where a separate artery is supplied to the kidney opposite each vertebral segment. These anomalies were of great importance to surgeons, and might give rise to serious trouble in extirpating the kidney. Dr. Shepherd related a case where he had met with these supernumerary vessels in operation on the living subject.

The Times and Register

A Weekly Journal of Medicine and Surgery.

WM. F. WAUGH, A.M., M.D., Managing Editor.

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PREACHERS *vs.* MEDICAL ETHICS.

IT is generally safe to accept and entertain a proper respect for the standard of ethics of any one of the liberal professions as formulated by the reputable and accredited representatives of that profession. It is always safe to look with suspicion upon those who persistently violate the established ethics of the profession to which they belong, although one may not know enough to understand the principles of those ethics. It is also generally an unwise act to ignorantly intrude in the affairs of a profession of which one knows nothing, or to intercede to prevent one from being affected by the just sentence passed upon him by the organized profession to which he belongs. For example, when a lawyer is disbarred he generally deserves it, whether the non-professional public quite understands the nature of his unprofessional conduct or not. Generally, to be "unprofessional" is to be ungentlemanly, and, generally, also mercenary, selfish, dishonest or inhuman.

To illustrate: the legal profession considers it disreputable to be an advertising divorce lawyer, or to be a "shyster," instigating litigation and strife for the sole purpose of getting a fee; the clerical profession considers a "false prophet" leading a band of deluded followers simply for his own personal aggrandisement or gain, or a hallelujah faith curer, as beneath their professional association; and so on throughout the recognized liberal professions—they all have their proper standards of professional worthiness and honor. Then, is it anything derogatory to the medical profession that its members do not like to affiliate with those whom they believe to be unworthy to represent, properly, their noble calling? Then would it not be a little more becoming if those who are incapable of properly judging in such matters should at least have the good sense to keep "hands off?" Yet it is a very suggestive fact that in the calendar of saints of a certain church of a very large following are to be found the names of over thirty quack doctors, while no scientific physician of ethical principles was thought worthy of canonization.

Let us examined a little into some of these much-abused principles of ethics and lay bare the motives dictating them.

The respectable portion of the medical profession have agreed not to do any advertising. The good sense of this any one can see at a moment's reflection. The minute that is given up medical skill is no longer a requirement for success; what one may do all will do, and then the one who can pay for the most "space" and the loudest puffs in our great dailies takes the practice. Then, also, not only would the quality of medical service decline, but its cost to the people would increase many fold, as the patients, finally, would pay for all that advertising. But, after all, the real motive of that principle of ethics is not one of expediency only; it is founded upon the better principle that it is unbecoming to the dignity of a man of true learning to boast of his own attainments.

Another principle of medical ethics, and one which it seems the hardest for the mercenary world to understand, is that no true and worthy physician will keep secret

a remedy which he has discovered and use it for his own pecuniary gain. This is the most magnificent example of true socialism that the world has ever seen. As soon as a physician has made a therapeutic discovery he must make it known, that his professional brothers may use it in their practice, and thus, without delay, all suffering humanity may enjoy the benefit of it. In return, he and his patients have the benefit of the discoveries of other physicians the world over. This is the explanation of why the physician of noble impulses naturally despises the patent medicine man. (A word of explanation should be given here, however; the patent medicine is rarely, if ever, a discovery; it is generally a fraud.) Is there any one so low that he will not share in this feeling of contempt for the nostrum vendor?

There is one class of men, however, who will not learn wisdom, even by experience—the religious newspaper men and the certificate-dispensing preachers. Now there is not a very large proportion of the clerical profession given to certificate-writing—not more, perhaps, than one per cent., and not the most reputable portion of the profession either. Yet there are quite enough by their loudness and bold obtrusiveness to bring reproach upon the profession to which they belong. The manner in which we can induce them to do better is not to abuse them for what they do in their ignorance, but try to show them, patiently, the better way.

The preacher will boldly give a certificate for a medicine of the composition of which he knows nothing, upon the observation of a single case, of extremely doubtful diagnosis; while the scientific physician will hesitate to give more than a report favoring further trial and observation, even after having favorable results with a known drug in a hundred cases accurately diagnosed. A clear example that "fools rush in where angels fear to tread."

We have seen a conspicuous example recently of a preacher betraying his people into the hands of the charlatan, when a much advertised Brooklyn preacher introduced into his own pulpit a much-advertised doctor of secret methods for the purpose of the further advertisement of both of them. We think that, for once, there "were two of a kind" in that pulpit—the quack preacher and the quack doctor. They were well matched—brothers as it were. We always estimated that preacher as a sensational mountebank, and this gives but another proof of our views. By so grossly violating the instinctive sense of propriety and regard for truth possessed by the best class of minds, he is injuring the cause, for which he himself stands, far more than the most candid, out spoken infidel can do.

However, there are few preachers who will not be convinced if the physician will kindly and patiently explain to them the reasons of our opposition to secret medicines and secret methods. If one still persists in his unjustifiable methods, we may console ourselves with the truth that one who flagrantly disregards the ethics of another profession has generally a low standing in his own. J. J. T.

Annotations.

WE wish to state, in justice to a fellow editor, that the article on "Specific Medication," page 283, of our issue of June 25, first appeared in the *Eclectic Medical Journal*, of Cincinnati. The failure to give credit was an unintentional oversight.

DR. O. McLEOD SMITH, of Palmyra, Va., writes that one article by Dr. Waugh was worth one entire year's subscription to him. He says, further: "Long live THE TIMES AND REGISTER, and may it ever continue to illumine the great firmament of medicine, as it has so ably and efficiently done heretofore as a star of the brightest thought."

A NUMBER of letters are at this office for the gentlemen who advertised practices for sale. Will they kindly send for them, as the addresses have been mislaid.

Letters to the Editor.

"THE AMERICAN ECLECTIC MEDICAL COLLEGE OF CINCINNATI."

IN your list of medical colleges in the Students Number I do not find the American Eclectic Medical College, of Cincinnati. There is a "so-called" expert in our country waiving a diploma from such an institution.

Please tell me whether there is such a college. If so, is it an honorable institution? E. R. LAYNE.

TURNERSVILLE, TEXAS.

[Polk gives the following items: American Medical College (Eclectic) Cincinnati, Ohio. Organized 1839. Merged into the Eclectic Medical Institute, 1857.

American Eclectic Medical College, 1879–1882, Cincinnati, O. Organized in 1879 as the successor of the Physio-Eclectic Medical College, extinct.

American Eclectic Medical College, Cincinnati, O. Organized in 1883 as the successor of the preceding. The faculty embraces eight professors and one assistant.

We are unable to give any information as to its standing.—ED., TIMES AND REGISTER.]

ARSENITE OF COPPER IN CHOLERA INFANTUM.

DURING the last year I have treated quite a number of cases of cholera infantum with the arsenite of copper, and so far have found no other medicament that yields such uniformly good results. As palatability, especially in children, is a great desideratum, the tastelessness of the strength ordinarily given, other things being equal, should be an important factor in its favor. I have on hand tablets āā gr. 1-60, and my plan is to order one of these dissolved in from three-fourths to one ordinary tumblerful of water. Of this solution one teaspoonful is to be given every fifteen minutes, half hour, or hour, according to the urgency of the symptoms. At the same time, of course, the surroundings are to be made as hygienic as possible. Strict orders are given that no food which has once been offered to the child and has stood some time, shall be offered again. A strong attempt is made to explain to the mother or nurse the importance of regularity in feeding, and to extract a promise to feed only at intervals of two or three hours. Where sterilizing or a sterilizer is out of the question, and cow's milk is given, either condensed milk or one of the standard infant foods is substituted until the child has gotten well. In spite of the fact that many of the cases alluded to were dispensary cases, where good hygiene was not to be had, excellent results were the rule.

ERNEST B. SANGREE.

744 SOUTH FIFTEENTH STREET, PHILADELPHIA.

NITRATE OF STRYCHNINE FOR INEBRIETY.

WILL you be kind enough to give me the correct formula in all particulars how to use the strychnine nitrate given in formula in Vol. xxiii, page 108, with corrections given in same volume, page 164. Both formulæ are incomplete, the first would prove fatal if given in quantity as directed; the last gives correct quantity, but makes no correction in use. Will you please give me the correct interpretation of the use of the remedy mentioned, and very much oblige a subscriber to your journal. R. G. ALLEN, M.D.

WASHINGTON, ILL.

[The correct formula is:

℞.—Strychninæ nitratis..... gr. $\frac{9}{10}$.
Aquæ destillatæ..... ℥iij-gr. vi.
M.—S. From 7½ minims to 37½ minims to be injected once daily.

The smaller dose contains gr. $\frac{1}{30}$ of the salt; but it will generally be found necessary to increase this largely before any effect is obtained. Of course, these large doses are dangerous, but one who expects to "jugulate" alcoholism in a few days must be prepared to take the consequences.—W. F. W.]

JACKSONIAN EPILEPSY FOLLOWING TRAUMATISM.

I HAVE a little patient on whose case I would be glad to have your opinion.

Wilmer Davis, aged four and a half years—female—got a fall when she was three years old, striking her head on the floor, causing a bruise in the edge of her hair, one and a half inches to the left of the median line, and one and three-eighth inches above the brow. This was followed by a severe abscess, discharging for four months, from which the child seem-

ingly recovered and remained well for one year, or, until last June. Then she commenced to have spasmodic contractions of the left big toe, the flexors predominating. The spasms coming on every eight to twelve hours, gradually increasing in frequency and severity for six weeks, when the whole left side, and, finally, to some extent, the right also, became affected. The fits came on as many as eighteen to twenty-one times in twenty-four hours, when she loses the power of speech, but never becomes unconscious. During this time she was under the care of a regular physician, who treated her with bromide of potassium, notwithstanding, the child grew rapidly worse.

At this time, a second physician took charge of the case, and put her on the following prescription :

℞.—Potassium bromide..... ℥ss.
Chloral hydratis..... ℥ss.
Ex. ergotæ fl..... ℥ss.
Syrupi..... ..... ℥ij.
Aquæ.....q. s. ad ℥vi.
M.—Sig. Dessertspoonful three times a day.

This controlled the spasms for three weeks, when they came on again, since which time she has been having them as often as once a week, and sometimes as many as three in twenty-four hours, but not so severe as they were before she commenced the last formula. If she be sitting or standing when the fit comes on, she suddenly falls, but never loses consciousness. She is gradually growing worse. The child is well-grown for one of her age, and seems to be very well nourished. She never has had any other sickness of any moment. The case has recently come under my care, and I am very anxious to relieve her if possible, and any help you can give me will be most graciously received. Do you think the fall caused the spasms? What course of treatment would you advise?

GEO. B. NANCE, M.D.
UNIONVILLE, N. C.

[Traumatic partial or Jacksonian epilepsy. While the bromides may give considerable relief, the case appears to be one demanding the use of surgical measures; the trephine applied to the seat of injury.]

IRRITATION OF BLADDER.

I AM an attentive reader of your "Notes and Comments," and thought I would write you a letter about a patient of mine. He is a young man twenty-one years of age, and a school teacher by profession. He has never had gonorrhœa, but practised masturbation in his youth. He is very temperate in his habits. As soon as he ceased masturbating he began to have seminal emissions, and now has an emission once or twice per week on an average. He also began to be troubled with dribbling after he had urinated. He was not bothered with frequent micturition to any extent until about a year ago. Since then it seems to have increased on him until at the present time he has to urinate on an average every two or three hours during the day, and once or twice at night. Sometimes he can retain his urine five or six hours during the day, and all the night. On the other hand, he sometimes has to urinate every hour during the day. He had had one or two attacks of what I called acute cystitis.

There is a dribbling after every urination, especially if he coughs violently, or bends over suddenly. The stream is rather small and twisted and is slow about starting. He sometimes complains of a dull pain in penis. The bladder when distended is tender upon being pressed. Bowels are somewhat constipated at times.

He passed about a half pint at each urination. Specific gravity varies from 1010 to 1026, being lowest when he has to urinate most frequently; urine is neutral in reaction. I have tried bromide of potassium and monobromated camphor for the emissions, and have also used steel sounds, but these, I think, were the cause of the attacks of cystitis, so I ceased using them. As he has frequent erections at night I advised cold baths to privates, but these only seemed to aggravate the urinary disturbance.

He had a large collection of smegma beneath prepuce, which I removed and had him wash prepuce two or three times a week with warm water. I would not worry about the emissions if I could stop his frequent micturition and dribbling at the close. There is no pain while urinating and no pain upon pressing upon the perineum. He has had to cease teaching on account of frequent urination, and is nearly discouraged, and so am I. I tried salol, 5 grs. four times per day for four or five days, but as he seemed to think it constipated his bowels I quit using it. Does it have a tendency to con-

stipate the bowels? Perhaps I did not use it long enough to get any effect. Now, Doctor, what would you advise in the way of treatment, and do you think I can safely assure him of an entire cure? I will be very grateful to you if you can help me out as I hate to give it up. The patient has a good appetite, and if it were not for this trouble would be all right. Hoping for a reply, I am

Very sincerely yours,

H. B.

[I would give him 10 drops of dilute nitric acid before each meal, increased to 20, if necessary. Also tighten up his vesical sphincter a little with erigeron; a drop or two of the oil every morning. Plenty of cold water to spine; absolute cleanliness to the genitals, washing smegma away twice a day.

W. F. WAUGH.]

TREATMENT FOR CYSTITIS ASKED.

I HAVE chronic catarrh of the bladder, nose, and rectum; in fact, all my mucous membranes are catarrhal. My bladder bothers me the worst. I have to get up ten times every night to micturate. I can't ride but very little horseback. I I do most of my practice in a cart or jumper. I am forty years old, and have been bothered with catarrh of the bladder for over twenty years. I have taken nearly every medicine recommended for catarrh of the bladder. I have taken iron, ergotine, buchu, acetate, and citrate of potash, belladonna, staphysagria, nux vomica, gelsemium, thuja, bicarb potash, and many other drugs too tedious to mention. I am now taking Lambert's lithiated hydrangia. If any of the medicines I have taken did me any good I could never tell it. I have dyspepsia, and have constipation of the bowels. I use cascara sagrada for bowels, and hot salt water injections up rectum to relieve vesical irritation. I take phosphate of soda for sour stomach and to reduce acidity of urine. I have taken some citrate of lithia and macrotis. I am so weak in my back that I can't lift anything. Sometimes I can't turn over in my bed for a month. I am washing out my bladder twice a week with hot borax water. I run half a gallon through the bladder, and then take asepsin, gr. xx; boracic acid, gr. xx; solution of hydrastin, ʒj; to water, ℥ij, and leave that in the bladder as long as I can hold it, which is about half an hour. I can't stand it to flush the bladder every day, it gets up too much irritation of the urethra and bladder. My stomach is nearly always sour. Urine smells ammoniacal. There is a discharge coming off the prostate or neck of bladder all the time, just like the white of an egg, and the discharge is worse when I ride horseback. My urethra is very tender, burns and stings when I urinate just like a man with clap. My testicles are very small, and tender to the touch, and hurt more or less all the time. I am losing my sexual powers, and my testicles are getting smaller all the time. I have a bad case of chronic catarrh of the bladder, rectum and nose. The bladder is the worst of all. If I can't get cured I will have to quit practice. I have been this way for over twenty years, and gradually get worse. I am very gray headed, and would like to know how you use jaborandi for gray hair; how much to take at a dose, and how often to take it in a day, and how long to continue it before the hair gets to its natural color. I have taken bromide of potash and soda, but have not taken any for several years. I am introducing a No. 28 American steel sound once a week that has helped me some. I have taken one pound of Parke, Davis & Company's fluid extract saw palmetto for atrophied testicles. Did I take it long enough to do any good?

J. M. R.

[The case is one of myelitis, requiring massage, faradization and Turkish baths. For the acid dyspepsia, papoid and maltine before meals. For the cystitis, salol, gr. v, four times a day. For the atrophy of testicles, etc., rest. For the premature loss of hair, jaborandi; a dose of the fluid extract large enough to cause some salivation and perspiration (20 to 40 drops), to be taken at bedtime every night.

ED. TIMES AND REGISTER.]

BEDFORD CITY, VA.

THIS city of about 3,500 inhabitants is situated in Bedford Co., Va., the county seat of which it is. Its location adapts it splendidly for a summer resort, being situated east of the Blue Ridge Mountains, at the foot of the peaks of Otter, and, therefore, possessing all the advantages possible in a hill country.

The altitude is about 1,000 feet above sea level. The advantages afforded are the pure air, cool nights, absence of malaria and mosquitoes, freedom from contagious epidemics, good natural drainage, and last, but not least, a magnificent and unlimited supply of pure water. This last commodity is obtained directly from a spring arising between the peaks of Otter, which are of Freestone formation. The scenery in and around Bedford City is magnificent, equaling, in the opinion of many, some sections of Switzerland. The Blue Ridge runs a northwesterly course through the country, and three of the highest mountains of that range are in the county. Of these the most famous are the twin peaks of Otter, named "Sharp Top," 3,893 feet high and "Flat Top," 4,016 feet high, and are about ten miles from Bedford City. The view from the top is one of the sights of the United States, it being possible to see forty-eight counties, and they are the center of a circle whose radius is eighty miles. The other mountain is the "Apple Orchard," 4,120 feet high and about eighteen miles from Bedford City. The surrounding country affords opportunities for beautiful drives and excursions of all kinds. To the botanist, entomologist and mineralogist this section can offer great inducement, especially so to the last named. Among the many minerals found may be mentioned cyanite, zinc, kaolin, pyrites, magnetic iron and hamatite ore (brown), and asbestos is found on the south side of the county. Fishing among the mountain streams and hunting can be indulged in; of the latter, quail and wild turkey in the season, and, occasionally, bear hunting.

A word more on our accommodations. Bedford City is not a mushroom place, having existed for over a century under the name of "Liberty." It is situated on the Norfolk and Western Railroad, twenty-five miles west of Lynchburg and twenty-eight east of Roanoke. We have three trains daily each way. By leaving New York or Chattanooga at 4.30 P. M., Bedford can be reached by breakfast time next morning. We are only seven hours from Washington, D. C. The depot is the prettiest in Southwest Virginia, having been recently erected at a cost of $50,000.

About a block from the depot, standing on a slight eminence, is the Hotel Bedford. This hotel was erected in 1890 and is now fully equipped for business. Its appointments are luxurious; cousine, all that can be desired; management, very courteous and obliging. The hotel cost about $125,000 when finished. It is a first-class hotel, and admitted by visitors to be one of the best south of Washington. Its capacity is about 175 to 200; has electric lights, telephone; billiard saloon, reading, writing and smoking-rooms; also reception-rooms, very handsome dining-room and ball-room; band and omnibuses, etc.

It is situated about three-quarters of a mile from the center of the town. Mr. Geikie is manager. Rates: $2.50 to $3.50 a day; $10 to $20 a week; monthly, special. A weekly German is held generally on Fridays. About three-quarters of a mile from the hotel is the "Three Otters" mineral water spring, the water from which is supplied to guests at the hotel free of charge. The water is on the farm of Geo. A. Micholls, Esq., and the general public have permission to its unlimited use. The water has a well-known local reputation for dyspepsia, vesical disorders, hernia, general debility, etc., and many cures of these troubles are reported. There is a company now forming to carbonize, bottle and ship the water to the markets. It is favorably reported by Dr. W. D. Hooper, of Bedford City, and recommended highly by him. Col. Purcell, of Purcell, Ladd & Co., of Richmond, Va., also favorably notices the water. The following analysis was made by Prof. Bowman, late of the Virginia Agricultural and Mechanical College, Blacksburg, Va., and now of New York City:

The water contains per gallon of 231 cubic inches 6.30555 grains of solid matters. A qualitative analysis shows the presence of

Lime,	Combined with Carbonic Acid, Hydrochloric Acid, Phosphoric " Silicic "
Oxide of Iron,	
" " Manganese,	
Potash,	
Soda,	
Lithia,	
Magnesia,	
Alumina,	

Signed: WALTER BOWMAN,
Blacksburg, Va.

The following temperature chart was supplied by Mr. W. N. Stone, local observer for Metrological Bureau:

7.30 A. M. for June, July, August and September, 1891, mean average, 70°.

7.30 P. M. for June, July, August aud September, 1891, mean average, 58°.
7.30 A. M. for December, 1890, January, February and March, 1891, mean average, 45°.
7.30 P. M. for December, 1890, January, February and March, 1891, mean average, 55°.

Bedford City is lighted by electricity, both streets and residences; has telephone exchange; churches for four denominations, viz.: Episcopal, Presbyterian, Methodist and Baptist; good stores; Masonic Lodge and Royal Arch Chapter; first-class schools and good society. Living is cheap; rents average low.

Of the schools there are:

Randolph, Macon (Methodist), for boys; last session had nearly 200.

Behnert Seminary (Presbyterian), girls; had 150 scholars last session.

St. John's School (Episcopal), girls; had 40.

Public school; about 300.

These latter facts are placed here for general information to the profession.

Close by are Lynchburg, 27,000 inhabitants, about twenty-five miles east; Roanoke, 25,000 inhabitants, about twenty-eight miles west; Blue Ridge Springs, a well-known and fashionable summer resort, is about twenty miles west, and within one day's travel are Richmond, Va., Natural Bridge (only three or four hours), Luray Caves and Weyer Caves on Shenandoah Valley, Yellow Sulphur, White Sulphur (Montgomery Co.), and Greenbrier, White (W. Va.).

SYDNEY J. BAKER, PH. G., M. D.
BEDFORD CITY, VA.

Book Notices.

HIGHER MEDICAL CULTURE. By W. R. DUNHAM, M.D., Troy, N. H. Price, $1. Published by the author.

This work is an argument to support the doctrine that medicine has no active power, but, by its presence, merely provokes functional activity in the various organs and tissues with which it comes in contact. Upon this theory, a complete change would have to be effected in our department of "physiological action" of drugs.

MATERIALISM AND MODERN PHYSIOLOGY OF THE NERVOUS SYSTEM. By W. H. THOMSON, M.D., LL.D., of New York. G. P. Putnam & Sons, N. Y.

A little work of exceedingly great interest to the student of the mind and mental phenomena.

THE USES OF WATER IN MODERN MEDICINE. By SIMON BARUCH, M.D., of New York. Geo. S. Davis, publisher, Detroit, Mich.

This work is published in two numbers of the "Physician's Leisure Library," at 25 cents per volume. Every physician should have it. Baruch is the American authority on the science and art of hydropathy.

WHAT TO DO IN CASE OF ACCIDENTS. By B. MERRILL RICKETTS, Ph.B., M.D., of Cincinnati, O.

This is a neat little volume, in flexible cloth, suitable in size for the pocket. The usual accidents and emergencies are treated according to the best methods.

The Medical Digest.

WOUNDS WITH DYNAMITE.—The action of dynamite seems to be almost as chaotic as that of lightning, to judge from an occurrence related in *La Science Moderne*, an abstract of which is given in a recent number of *L'Union Médicale*. A nickel miner was fishing with dynamite cartridges, when one of them exploded as he was in the act of casting it, and carried away one of his hands. During the twelve hours that it took to convey him to a hospital ship, under a tropical sun, gangrene set in, and he died shortly after reaching his refuge. His body was riddled with communicating subcutaneous channels, and at the post-mortem examination it was found that the nails of the lost hand, having been detached, had acted as projectiles, and were found near the spinal column in the thoracic region.
—*N. Y. Med. Jour.*

SEA-SICKNESS AND ITS TREATMENT.—SIR:—Dr. Graily Hewitt's remarks in the *British Medical Journal* of May 14, as to visual disturbances occasioning seasickness are interesting, but that these disturbances originate *mal de mer* is disproved by the facts that blind people become sea sick, and that persons sleeping are not always protected, for suffers have been even awakened by a full paroxysm of the attack. Yet, on the other hand, it

is true that when asleep a person is much less likely to be troubled than when awake, and the remedial measures mentioned by Dr. Hewitt—the horizontal position and bandaging the eyes—are not unimportant. For obvious reasons, such agencies could only be used on a short voyage, as from Dover to Calais.

While by no means minimizing his suggestion in regard to this trip across the Channel, I desire to draw attention to another mode of treatment. A solution containing in each ounce 30 grains of bromide of potassium and 30 grains of chloralamide has been singularly advantageous in long voyages. I have also suggested its adoption as a preventive of sea-sickness in short journeys by sea—such as from Harwich to the Continent, or Fleetwood to Belfast. The passenger should prepare for the journey by taking an antibilious pill for two successive nights before going on board, and when on board should take no food, retire to his cabin, and take a full dose of the solution. The effects of this treatment are illustrated by the following details, which have been sent me by a medical friend who acted upon the suggestions given:

Before crossing from Leith to Hamburg a few weeks ago, I thought I would try to stave off my inveterate enemy—sea-sickness—by following your advice, and taking with me a solution of bromide of potassium and chloralamide (chlorobrom). The night before sailing, I took a couple of podophyllin pills, and the next night a full dose of chlorobrom, and went to my berth before the boat was out of the Leith roads. I slept soundly, was not sick the whole way, and never missed a meal, although the boat pitched a good deal. I may mention that I have crossed twice to New York and three times to Hamburg, and without exception have been badly sick each time. In fact, returning from Rotterdam to Leith a fortnight ago, I was unable to take similar precautions, and though it was no rougher than on the former occasion, I was very sick—ate nothing one day but a slice of toast, an egg, and a cup of tea, and after much severe retching, repeatedly vomited small quantities of bile. M. K. also took the medicine, and suffered as little as myself. A girl, traveling steerage, who was exceedingly sick and miserable, also took a dose, and passed a comfortable night, sleeping soundly she told us next morning. I also gave some to a fellow-passenger, and he writes: "Having taken upon your recommendation two doses, I am able to declare that, although usually unwell under similar conditions, I have escaped sea-sickness, have enjoyed my food, and have slept as soundly as in my own bed." Having last year suffered severely in my passage from Glasgow to Shetland, I was glad to make trial of chlorobrom this year, and to find on the voyage northward that it effectually relieved the nausea, and cut short the retching after vomiting had commenced, and on the return journey I tested its prophylactic action. Two nights before embarking I took a pill of mercury and podophyllin. Its action was so marked that I did not take a second, but took 6 drachms of the solution before the steamer started from Lerwick at 5 A.M. The tossing was sufficient to wake me several times, but on such occasions I experienced for a few minutes an exquisitely pleasurable sensation of repose, which the rocking of the steamer seemed rather to enhance, and then fell asleep again. A lady, who made use of chlorobrom on the same voyage, stated to me that she positively enjoyed the rolling of the steamer. Although feeling in no sense drowsy or oppressed, I continued to lie on the sofa, except during an interval of an hour or two, for twenty-eight hours. During the greater part of this period I slept, partly in consequence of the loss of rest during the night, and a fatiguing walk on the day before going on board. As we entered the Firth of Forth, I rose and enjoyed a substantial breakfast, feeling quite vigorous and refreshed.

Other reports have reached me equally satisfactory as to its efficacy in short voyages, and I have no hesitation in saying it should be tried by all who contemplate and dread a voyage from this country to the Continent. All the details I have obtained justify me in affirming that—

1. This solution is absolutely safe and harmless, and that it produces a refreshing sleep without any baneful after effects.

2. When judiciously administered it prevents, and in all cases alleviates, sea-sickness. I am, etc.,

M. CHARTERIS, M.D.,
GLASGOW. Professor of Therapeutics and Materia Medica, University of Glasgow.

—*British Medical Journal.*

ARTERIO SCLEROSIS.—After presenting to the Med. Chir. Society of Montreal the details of a case, with usual result of sudden death without warning, and describing the post-mortem appearances, Dr. G. T. Ross proceeded to give the following very valuable review of this generally imperfectly understood disease. The paper is reported in full in the *Montreal Med. Jour.*

Atheroma, arterio sclerosis, or endarteritis deformans was first conceived as an independent affection by Messrs. Gull and Sutton. Atheroma, a term meaning pap or pulp, is described as a variety of fatty degeneration affecting especially the large arteries and valves of the heart. The disease is important, as leading to certain grave accidents and lesions pertaining to the parts affected. It consists primarily of a deposit beneath the lining membrane of the arteries, or the endocardium investing the valves of the heart, of a substance which presents a yellowish or whitish color, and is of a cheesy consistence. Microscopically it is composed of fatty granules, with crystals of cholesterin in abundance, and certain earthy ingredients (Flint). The disease presents three tolerably well defined stages (Little).

(*a*) In the first stage we notice, when the vessel is slit open, grayish patches by which the membrane is irregularly thickened; these patches seem to lie on the surface of the membrane, but this is deceptive, the endothelium lies between them and the blood-stream, and is, at least at the beginning of the morbid process, unaffected. The material of which the patches are formed is really situated between the tunica interna and tunica media; it is semi-cartilaginous in consistence, and is formed by an abnormally rapid multiplication of the deeper cells of the interna, the new growth pushing up this tunic with its superimposed endothelium, and so causing a bulging into the interior of the vessel. The process is of the nature of an inflammatory change; that is, it consists in the proliferation of cellular elements in consequence of some influence which has excited them to unnatural growth.

(*b*) In the second stage, the cellular elements of which the new growth is composed undergo a process of fatty degeneration; and in consequence it becomes yellowish in color and pasty in consistence; this pasty appearance caused the name atheroma to be originally given to the disease. It not unfrequently happens that the whole of the internal coat, with its endothelium, is involved in the softening, and gives way under pressure of the blood, leaving an excavation, the so-called atheromatous ulcer, the floor of which is formed by the media and adventitia.

(*c*) In other instances the pasty mass, instead of being washed away, becomes the seat of calcific deposit; this being the so-called third stage of the process. The appearance of a vessel in which atheromatous disease has reached this stage is very striking; plaques, which present to the naked eye the appearance of bone, but do not show its minute structure, are observed at intervals in the walls of the vessel, and their comparatively sharp spiculæ project into its interior; in the aorta it is not uncommon to find such plates an inch long and half an inch broad, and in the smaller arteries the calcific deposit sometimes forms a ring round the vessel. In the latter the calcareous particles appear to be deposited in the patch while it is still firm, so that the second stage of the process is wanting.

Some authors have divided cases of arterio-sclerosis into nodular, senile and diffuse forms. The macroscopic appearances of the nodular variety are quite characteristic. The aorta presents in the early stages, from the ring to bifurcation, numerous flat projections yellowish or yellowish white in color, hemispherical in outline, and situated particularly about the orifices of the branches. In the early stage these patches are scattered, and do not involve the entire intima. In more advanced grades the patches undergo atheromatous changes. The material constituting the patch softens and breaks up into granular material consisting of molecular *débris*. Here the primary alteration consists in a local infiltration in the media and adventitia, chiefly about the vasa vasorum, the affection being really a mesarteritis and a periarteritis. These changes lead to weakening of the wall in the affected area, at which spot the proliferative charges commence in the intima, particularly in the subendothelial structures, with gradual thickening and the formation of an antheromatous patch of nodular arterio-sclerosis. The researches of Thoma show that this is really a compensatory process, and that before its degeneration the nodular patch,

which post-mortem projects beyond the lumen, during life fills up and obliterates what would otherwise be a depression of the wall in consequence of the weaking of the media. This condition is one which may lead to dilatation or aneurism in the early stage, before the weakened spot is thickened by the internal changes. In the second of this division, *viz.*, senile arterio-sclerosis, the larger arteries are dilated and tortuous, the walls thin but stiff, and often converted into rigid tubes. The subendothelial tissue undergoes degeneration and in spots breaks down, forming the atheromatous abscesses. The greater portion of the intima may be occupied by rough calcareous plates. The heart may not be enlarged. In the third form, *viz.*, diffuse arterio-sclerosis, the process is widespread in the aorta and branches, and may be associated with the nodular form. The subjects of this variety are usually middle-aged men, say forty to forty-five years, but it may occur early. The affection is very prevalent among negroes. It is met with in strongly-built, muscular men, and they rarely present on the autopsy table signs of general œdema, or if this exists, it has come on during the last few days of life. In this group the heart shows the most important changes, the weight being increased. Fibrous myocarditis is often present, particularly when the coronary arteries are involved.

The cause of this disease is now generally conceded to be over-strain of the vessels. The onset of arterio-sclerosis depends (Osler), in the first place, upon the quality of arterial tissue which the individual has inherited; and, secondly, upon the wear and tear to which he has subjected this tissue. That the former is the more important is shown in cases where the disease occurs in early life, where none of the recognized causes have existed. For example, a man of about thirty years may have arteries of sixty years, and a man of forty years may have arteries as much degenerated as they should be at eighty years; and this was found in the case which I bring before your attention to-night.

Entire families sometimes show this tendency to early arterio-sclerosis, a tendency which cannot be explained in any other way than that in the make-up of the machine bad material was used for the tubing. More commonly this disease results from the bad use of good vessels, and among the causes of this condition are the following:

1. Chronic intoxications.
2. Overeating.
3. Overwork of the muscles.
4. Renal disease.
5. A cachectic state of the system or some cause that alters the constitution of the blood and weakens the heart's action, such as prostrating illness and the mental conditions of anxiety and grief.

The dangers to which atheromatous arteries expose the person in whom they exist are varied. The stream of blood is retarded by the projection of the new growth into the vessel, and still more by the destruction of the elasticity of its coats; and hence ensues a failure in the nutrition of the organ which depends for its supply on the diseased vessel; this is said to be a cause of cerebral softening. When the paste-like mass is washed away, it sometimes happens that the blood insinuates itself between the coats of the vessel, producing a dissecting aneurism; or the portion of the vessel which has been marked by the removal of the internal coat yields to the pressure of the current and a sacculated aneurism is originated; sometimes the diseased vessel bursts. Cerebral vessels, probably on account of the thinness of their walls, are specially liable to rupture when they are the seat of atheromatous changes; and occasionally a diseased coronary artery has given way, filling the pericardium with blood. Arteries have been completely occluded by fibrin deposited on the spiculated edges of calcareous plates, causing senile gangrene; embolic plugging of distant vessels at times results from the detachment of such fibrinous clots and the washing away of atheromatous débris. Rigidity of the larger arteries from this disease is a frequent cause of hypertrophy of the left ventricle, on which increased work is imposed owing to loss of elasticity in the vessels.

Osler says that in this disease many patients never come under observation during life, but are seen for the first time on the post-mortem table, having died suddenly from blocking of a coronary artery, cerebral hemorrhage, or rupture of an aneurism. Among important symptoms of arterio-sclerosis are the following:

Hypertrophy of Heart.—In consequence of the peripheral resistance and increased

work the left ventricle increases in size. The chamber may be little, if at all, dilated. The signs pathognomonic of arterio-sclerosis are: increased arterial tension, a palpable thickening of the arteries, hypertrophy of left ventricle and accentuation of the aortic second sound. For years the patient may maintain good health, there may be no renal signs, or perhaps transient albuminuria. The subsequent history will depend on the accidents which are so liable to happen, and may be cardiac, cerebral, renal, etc.

Increased arterial tension has been mentioned as an important sign. It may be difficult to estimate how much of the hardness and firmness is due to the tension of the blood within the vessel, and how much to the thickening of the wall. If, for example, when the radial is compressed with the index finger the vessel can be felt pulsating beyond the point of compression, its walls are sclerosed—(Osler).

At the heart, the involvement of the coronary arteries may lead to some of the symptoms already referred to, *viz.*, thrombosis with sudden death, fibroid degeneration, aneurism of the heart, rupture, and angina pectoris. Angina is almost always associated with arterio-sclerosis. Dilatation ultimately following hypertrophy may give us dyspnœa, scanty urine, and serous effusions. The existence of a loud blowing murmur at the apex may lead the physician erroneously to suppose the existing distress is due to chronic valvular disease, if he is seeing the patient for the first time. The cerebral symptoms are important and varied. Transient hemiplegia, monoplegia, or aphasia may occur in advanced arterio-sclerosis. Recovery may be perfect. It is not clearly known upon what these attacks depend. Renal symptoms are found in many cases. It is difficult to decide clinically whether the arterial or the renal disease has been primary. Respiratory symptoms are often found, particularly bronchitis.

As to the treatment of this disease it is mainly preventive, in avoiding those influences which act as causes of the disease, *viz.*, indulgence in alcoholic beverages to the extent of bringing about a gouty state of the blood;, excessive muscular efforts, particularly in constrained positions; postures which involve the long-continued contraction of muscles, and, as far as the brain and heart are concerned, all those states which favor over fullness of their respective arteries—in the brain, excessive mental application, deficient sleep, prolonged periods of sexual excitement (Little), grief, or prolonged anxiety; in the heart, efforts which involve holding the breath, causing distension of the right cavities and preventing free return of blood from their walls. This is what causes the life of the pearl diver to be a precarious and short one. Some of these men die from the effects of disturbed blood pressure in a few months, while deafness and incipient paralysis are common features. Could we prevent syphilis and the abuse of alcohol, could we ensure everybody against excessive bodily and mental strain, we should go far to obviate the necessity for trying to treat these arterial changes and their allies, concomitants and results, at least until a late period of life. Plumbism is, according to English writers, another cause of a preventable kind. The chief means of prevention is a strictly hygienic manner of life. Although there is reason to believe that arterio-sclerosis may be a matter of inheritance, yet the tendency can be effectually combated or delayed by temperance and moderation in all things—food and drink, work and play—and by the cultivation of an equable temper. The arteries which are the favorite seat of syphilitic changes are those of the brain. As it is impossible to be sure whether a syphilitic arteritis has gone beyond the point up to which retrogression may take place under the use of pot. iod. and hydrg., the patient should be given the benefit of the doubt by full anti-syphilitic measures. Apart from syphilis, the treatment of this disease varies with the presence or absence of compensating cardiac hypertrophy. If this be present, we should maintain it by careful regulation of the diet and exercise. The nutrition of the heart muscle is assisted by simple, nutritious, easily digested food; pure air, sufficient sleep, properly graduated exercise, bathing, and careful clothing of the body, it being remembered that the kidneys are seldom perfectly sound in these cases. The retention of excrementitious products being believed to cause arterial tension, careful attention to kidneys and bowels is imperative. In general atheroma, overexertion or sudden exertion must be avoided. In many cases there are no cer-

tain means of knowing the exact condition of the cerebral or coronary vessels, for these may be the seat of advanced disease while the radials and temporals may appear healthy; while, on the other hand, autopsies have shown the reverse condition may exist. It is notorious that individuals whose peripheral arteries are calcareous to the last degree not infrequently enjoy a life of surprising length and comfort. Drug treatment is always of secondary importance, except in syphilis, when pot. iod. is given; improvement or iodism being the indications of dosage. No drug can materially influence endarteritis other than specific origin. Bartholow and some others claim that salts of gold control the formation and cause absorption of connective tissue growth, and hence are indicated in this disease. It is given in the form of double chloride of gold and sodium, 1-20 to 1-40 gr. post cib. In persistently high arterial tension nitro glycerine (♏i of 1 per cent. solution) is indicated. This is put up in tablet triturates for convenience and accuracy. The nitrates relax unstriped muscle fibre remarkably. Diuretics, diaphoretics and purgatives are useful when indicated.

If compensatory hypertrophy is failing, the treatment is quite different. Rest is imperative, except in obesity with fatty heart, when Oertel's treatment carefully supervised will be applicable. Alcohol may be useful for impaired appetite and digestive power with the other many aids in this direction. If it be true that digitalis increases arterial tension, while strophanthus does not, the latter is to be preferred in this class of cases; some authors maintain that this difference is, however, somewhat theoretical. If digitalis be useful, Balfour's suggestion to give it with an interval of twelve hours between each dose, enables us to give the drug without the danger of accumulation.

Sleep is of the utmost importance, and morphine is one of the best hypnotics, apart from its usefulness in angina. In cases of great tension in muscular subjects, striking relief is afforded by abstraction of 15 to 20 ozs. of blood.

This serious disease, affecting as it does the seat of life itself, demands from a practitioner the exercise of the utmost skill and mature judgment which a careful, painstaking study of a given case enables him to apply. The elucidation of the many problems which arise in such cases has occupied the attention of the brightest intellects of the profession, and yet the insidious onset of the disease, giving no note of warning to the patient; the impossibility of procuring, after the disease is recognized, precise and positive data regarding the condition of the internal organs primarily or secondarily affected; the impossibility of judging with certainty in some cases as to whether death is imminent or remote; and the utter unreliability of any known drug in simple arterio-sclerosis, leave much to be desired in the further exploration of what has long been a *terra incognita*.

On the Method of Administering Salol.—Considerable use is now made of salol as an antiseptic, and it is generally given in the form of cachets or capsules. Dr. Balestier has lately called attention to the inconveniences which result from this plan. Having used it in this way in a child with typhoid fever, he noticed that the patient passed every day masses of the size of a cherry-stone, of irregular shape, sulphur yellow color, crystalline appearance and waxy consistence. These proved to be salol, agglutinated, and not decomposed in the intestine into salicylic and carbolic acids, by the action of the bile. The antiseptic power was lost, and, moreover, the masses acting as a foreign body, were dangerous. He (Balestier) concludes that salol should not be given alone in capsules, but mixed with some other powder, as salicylate of bismuth, magnesia, charcoal, etc., which, by interposition between the particles would prevent agglutination. It is best given, however, in the form of emulsion, as follows:

℞.—Salol	5	grms.
Gum arabic	4	"
Gum tragacanth	0.20	"
Dist. water	120	"
Tr. tolu	10	"
Simple syrup	30	"

A tablespoonful contains ½ grm. salol. Dose, 5 to 10 spoonfuls per day.

—*Rev. de Therapeutic.*

Effects of an Overdose of Codeine.—An overdose of codeine is not a common occurrence, and therefore Dr. Mettenheimer, who has met with such a case, has reported it. An elderly lady consulted him for a slight catarrhal, nonfebrile affection, which, however, gave rise to a troublesome, spasmodic form of

cough. For this he prescribed 0.03 gramme (about ½ a grain) of phosphate of codeine, in the form of a pill, to be taken every three hours. The patient, however, swallowed four of these pills, or about 1½ grains of the codeine salt, at once. Shortly afterwards she vomited twice and suffered from abdominal pain. There was, too, suppression of urine, and she felt very ill, being sleepy but unable to go to sleep. The next day she was still drowsy and had no appetite, but there was no return of the sickness. She was then seen by Dr. Mettenheimer, who found the pupils contracted, the pulse hard and quick, and the respiration accelerated. The cough had entirely disappeared. The contracted state of the pupils, the loss of appetite, and the abdominal pain, persisted for several days. No urine was passed until thirty-six hours after the pills were taken. On the third day the drowsiness had passed away. The cough did not return for a week, and when it did it was comparatively slight. This case seems to show that codeine in large doses has a very similar effect to opium, and that it may prove a most efficient remedy for some kinds of cough. As the tongue remained clean, it would appear that the vomiting was due to cerebral rather than to gastric irritation.

—*Lancet.*

THERAPEUTIC NOTES.

(E. W. Bing, M.D., Chester, Pa., Translator).

Formulæ:—*Diphtheria:*

℞.—Tannin ..... gr. x.
Glycerine ..... oz. i.
Alcohol ..... oz. ss.
Dist. water ..... oz. iv.
Oxygenated water ..... q. s. oz. viij.
Gargle.

—*Richardson.*

Functional Impotency:

℞.—Ext. cannab. Ind. ..... gr. v.
Ext. nux vomica ..... gr. v.
Ext. damiana ..... gr. xx.
For 20 pills. One after each meal and at night.

—*Med. Age.*

Whooping-Cough (Beale):

℞.—Thymol ..... gr. xviij
Carbolic acid ..... ℥iiiss.
Oil sassafras,
" eucalyptus,
" turpentine,
" tar ..... āā ℥ii.
Ether ..... oz. i.
Alcohol ..... q. s. ad oz. xxx
Thirty drops on handkerchief as inhalation; repeated every two or three hours.

—*Med. Age.*

Dermatol (a sub-gallate of bismuth) has been used with such success in France and Germany that it is regarded as a better preparation than iodoform. As an application to all excoriated or ulcerated surfaces, it is very useful. It is easily used, non-toxic, and favors healing. It is the best remedy for ulcers of the leg (non-syphilitic). It is not, however, indicated in torpid ulcerations, where granulations are insufficient.

It is used in form of ointment, powder, or with glycerine and gelatine (glabole?) in strength of $\frac{1}{10}$ per cent. as required.

—*L'Union Med. de Canada.*

News and Miscellany.

Professor Pancoast will summer at Long Branch.

Professor Henry C. Chapman is at Bar Harbor.

Professor Frank Woodbury returns to Glen Summit for the summer.

Dr. L. Webster Fox goes to the Neversink House for the hot season.

A case of hydrophobia has occurred at the Cook County Hospital, Chicago.

Dr. Sutton has operated on a case of biliary calculi; removing seventy-five.

Dr. J. Suydam Knox, of Chicago, died June 28, of peritonitis, superinduced by exhaustion and overwork. At the time of his death he was Professor of Obstetrics in Rush Medical College, and was very popular with all classes.

Dr. Nevin B. Shade has removed his headquarters to Philadelphia, and located at 1314 Arch street. He has decided to limit his practice to tuberculosis, devoting his life to the study of that disease. Dr. Shade is very firm in the conviction that his "mineral treatment of consumption" is the proper method of dealing with this affection.

Dr. George M. Gould, the energetic editor of the *Medical News*, offers a prize of $100 for the best essay showing "The Ridiculous Pretensions of Modern Homœopathic Practice." The essay should con-

tain not more than 15,000 words, and in simplicity and directness should be adapted to the most limited non-professional understanding. The essays are to be placed in Dr. Gould's hands on or before January 2, 1893. They are to be typewritten, not signed with the author's name, but accompanied by a sealed letter giving the author's name, with motto, or *nom de plume*. A committee will be appointed to decide on the merits of the essays, and when the decision has been made, the letters will be opened and the prize awarded. The prize essay will then be printed and supplied to physicians for distribution at cost of printing.

FREE carbonic acid gas is the constituent in all waters that renders them palatable and agreeable to the stomach. This gas is very light and volatile, and when water is boiled, it is driven off, and consequently the water becomes insipid and nauseous. These hot waters are not only saturated, but super-saturated with this free carbonic acid gas. It can be seen bubbling out of the hot water. Then we have in Hot Springs something that is not ordinarily found, hot water super-saturated with free carbonic acid gas, not only pleasant to the taste, but agreeable and even exhilarating to the stomach. Hence, it is not surprising that some of our physicians see some very remarkable cures of indigestion. The sudorific effects of these waters are very remarkable. If the patient bathes carefully, removing all oleaginous secretions or excretions from skin, and drinks freely of the hot water, it passes out of the pores of the skin in a very short time, taking with it effete matter which has oppressed the nervous system, and, in turn, made a languid, lazy circulation with all its evil effects. It literally washes out the system, if I may use the expression.

—*Hot Springs Medical Journal.*

IMPROVEMENT IN SPECTACLE FRAMES.—A correspondent from Germany in the *Occidental Medical Times* writes as follows:—"A medical student in Leipzig, a Mr. Lueddeckens, has lately invented a useful modification of spectacle-rests. This gentleman noticed that whenever he was obliged to make use of his spectacles, his nose became highly congested and in several ways gave rise to discomfort. The ordinary saddle of spectacles very easily involves compression of the veins of the nose, lying as it does at right angles to their course, and congestion of the nose is not at all an uncommon occurrence in persons wearing glasses. Nor is the disfigurement the only objection. Aprosexia nasalis, impairment of menal activity due to stoppage of nasal respiration, in consequence of congestion of the mucous lining or the presence of vegetations or tumors, is now a clearly recognized disorder. Since the first publications from Holland on this subject, quite a large number of cases have been recorded in which apparently dull-witted children showed a remarkable improvement in their perceptive powers after removal of the nasal disturbance. Similarly, students have found it impossible to continue their work, on the free passage through the nose being interrupted. Probably the chief factor here is the surcharge of the brain with insufficiently oxidized blood. As regards the spectacles, the improvement suggested is ingenious and plausible. It consists in fixing the glasses to two little rests or runners which lie parallel to the long axis (*sit venia verbo*) of the nose at each side, while the arch or saddle goes from one runner to the other without touching the skin at all. In this country, at least, this little invention will probably be gladly adopted by many thousands."

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S. Navy for the week ending July 2, 1892.

C. P. BAGGS, Assistant-Surgeon. Ordered to Naval Hospital, Mare Island, Cal.

DRENNAN, M. C., Surgeon. From Naval Academy, and to Navy Yard, Norfolk, Va.

WINSLOW, G. F., Surgeon. From the Navy Yard, Norfolk, Va., and await orders.

STOKES, C. F., Assistant-Surgeon. From Naval Hospital, Mare Island, Cal., and wait orders.

LUNG, G. A., Assistant-Surgeon. From Naval Hospital, New York, and to U. S. S. "Minnesota."

BARBER, G. H, Assistant-Surgeon. From U. S. S. "Minnesota," and to Naval Hospital, New York.

MEANS, V. C. B., Passed Assistant-Surgeon. From Navy Yard, New York, and to Naval Hospital, Norfolk, Va.

DRAKE, N. H., Passed Assistant-Surgeon. From Naval Hospital, Chelsea, Mass., and to Navy Yard, New York.

PAGE, J. E., Assistant-Surgeon. From Receiving Ship "Independence," and to the U. S. S. "Thetis."

The Times and Register.

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PAGE

ORIGINAL ARTICLES:

SOME OBSERVATIONS ON THE CAUSES, PREVENTION, AND TREATMENT OF INTERMITTENT MALARIAL FEVER. By Luther Sexton, M.D. - - - 71

A CASE IN CEREBRAL SURGERY. By Mark A. Rodgers, M.D. - - - - - - - - - - - - - 75

HISTORY AND THERAPY OF CASCARA SAGRADA (RHUMNUS PURSHIANA. DE CANDOLLE) IN SCIATIC AND SOME OTHER AFFECTIONS. By T. G. Stephens, M.D. - - - - - - - - - - - - - 76

AN EMERGENCY CASE. By Wm. F. Waugh, A.M., M.D. - - - - - - - - - - - - - - - - 78

EDITORIAL:

THE PRESENT POSITION OF ANTISEPTIC SURGERY 81

SANITATION A PROTECTION OF THE INDUSTRIAL CLASSES. *J. J. T.* - - - - - - - - - - - - 81

ANNOTATION:

Immunity from Consumption Produced by Use of Tobacco - - - - - - - - - - - - - - - - 82

BOOK NOTICES:

History of Higher Education in Massachusetts. *Bush* - - - - - - - - - - - - - - - - 82

Southern Women in the Recent Educational Movement in the South. *Mayo* - - - - - - - - 82

Cardiac Outlines. *Ewart* - - - - - - - - - - 82

THE MEDICAL DIGEST:

THE BEST FROM THE GERMAN JOURNALS. *Marcus*—Calculi in the Prepuce (*Beller*)—Salipyrine (*Argo*)—Unfavorable Results with Salpyrine (*Hilschman*)—The Salol Treatment of Acute and Chronic Cystitis (*Arnold*)—Paralysis Following Diphtheria (*Baginsky*)—Bronchncele (*Auerbauch*)—The Use of Cocaine in Operations for Mastitis (*Rossier*) - - - - - - - - - - - - - - - - 83-84

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—Injection for Gonorrhœa (*Bing*)—Preventive for Sea-sickness (*Meccrisse*)—For Simplea nd Impetigenous Eczema (*Dazac*)—New Method of Extracting Foreign Bodies from the Ear (*Humbert*)—Glycerine in the Treatment of Hepatic Colic (*Ferrand*)—Means of Determining the Sex of the Fœtus in Utero (*Lassier*)—A Case of Osteoma of the Frontal Sinus (*Pappert*)—Phthisis of "China" Potters (*Paté*)—Death Following an Intro-Uterine Injection of Perchloride of Iron (*Pletzer*)—Hay Fever (*Szohner*)—The Use of Massage of the Lumbo Sacral Region in the Treatment of Dysmenorrhœa of Young Women (*L'Union Med. de Canada*)—Qualities Necessary for a Good Antiseptic (*Mabboux*)—Vomiting of Pregnancy (*Federow*)—Formula: Treatment of Cystitis by Oxalic Acid (*Renaud*)—Prostitution (*Blaschko*)—A Suicide by Means of Leeches (*Jour. de Med de Bordeaux—Jour. de Med. de Paris*)—Tænin a Common Cause of Intercostal Neuralgia and of Shingles (*Dury*)—Menthol—Cobwebs and Tetanus (*Tourassi and Fraeni*)—Insomnia and its Treatment (*Lyon*)—Dresses "En Traine," *versus* Hygiene (*Lemain Med.*)—Remedy for Diphtheria (*Le Progrès Medicale*)—Sulpho vicinic Acid (*Renault*)—Antipyrine Associated with Bichloride of Mercury as an Antiseptic Treatment of Gonorrhœa (*Watier*)—Foreign Body in the Right Bronchus (*De Angelis*) - 84-88

Treatment of Seborrhœa of the Hairy Scalp (*Saalfeld*)—A Mixture to Replace the Opiates (*Portier*)—The Vertigo of Arterio Sclerosis (*Church*)—The Coated Tongue (*Duffield*)—Sir James Crichton Browne on Sex in Education (*Canada Lancet*)—Medicine in Fiction (*British Medical Journal*)—Bruises of Internal Organs (*Savory*)—A Peculiar Case—Misconceptions and Misnomers Revealed by Modern Gastric Research (*Slockton*)—A Cure of Infective Diseases (*G. and F. Klemplerer*)—Decadence of Surgical Antisepsis (*Northwestern Lancet*)—Had this Man a Vagina (*Bœckel*) - - - 80, 89-102

MEDICAL NEWS AND MISCELLANY - - - - 103

ARMY, NAVY, AND MARINE HOSPITAL SERVICE - - - - - - - - - - - - - - - 104

NOTES AND ITEMS - - - - - - - - - - iv, x

Original Articles.

SOME OBSERVATIONS ON THE CAUSE, PREVENTION, AND TREATMENT OF INTERMITTENT MALARIAL FEVER.

By LUTHER SEXTON, M.D.,

NEW ORLEANS.

MALARIA, literally translated, means bad air. By malarial disease is meant the sum of clinical phenomena observed in persons subjected to this bad air. (I am not sure but that bad water has as much to do with its production as bad air.) The element that makes this air or water bad is what the pathologists of to day are striving to attain. A short review of their discoveries and conclusions may not be out of place or uninteresting to your readers.

As far back as 1879 Klebs and Tomasi found in the air, soil and water of the Pontine marshes micro-organisms of cocci, algæ, and bacteria. These spores were cultivated, and, when injected into the veins of animals, produced fever. Thousands of other products injected into the veins are capable of producing the same result. Animals living in these marshes were not known to be subjected to malarial fever, so nothing scientific was proven at last by these experiments.

The anæmia of the malarial patient led Laveran to examine the red blood corpuscles. Attached to these he found cystic and mobile parasitic pigmented bodies, sometimes larger, again smaller, than the red blood corpuscles. These parasites possess ameboid movement. Flagella were also found with granules in the center; regular segmented rosettes were found in the blood.

Celli in 1883 announced malaria to be due to a plasmodium malaria or microbe and protoplasmic bodies. The action of these bodies upon hæmoglobin cause reddish or black pigment; he proved that in transfusion of blood from a malarial to

a healthy patient the result was malarial fever, the same bodies being found in the infected subject.

Reproduction in these micro-organisms takes place by segmentation. Cultures of the plasmodium failed to produce malaria, though the micro cocci were found in the culture fluid. This plasmodium, by later investigation, has been considered a result of Crudeli's or Lavaran's bacillus. While it may not be the cause, it is always an accompaniment of the disease in its different types. This plasmodium should be carefully looked for in every case where there is a doubt in the mind as to whether we have to deal with malaria or typhoid fever.

A significant fact in connection with this micro organism is that the nearer the chill-time we examine the blood, the more prolific we find the bacilli. Five hundred to six hundred diameters shows this germ very readily.

Warmth and moisture are essential to their development, and the soil around swamps and marshes seems to be their natural habitat.

Professor Joseph Jones, of New Orleans, La., has distinctly shown, as early as 1870, that the main lesions in malarial subjects begin in the blood; the blood distributes the infection to other organs which become secondarily affected. The con-current testimony of all pathological investigators, while they may differ as to the cause, recognize the first break to be in the blood either as (1) amœba in white blood corpuscles; (2) pigments in red blood corpuscles; (3) large solid bodies in interior of red blood corpuscles; (4) pigmented crescents developed in interior of red blood corpuscles; (5) rosettes form; (6) scattered small bodies, result of segmentation; (7) flagellate organs containing pigments; (8) pigmented granular bodies one-quarter to one-half size of red blood corpuscles.

After the induction of any of these organisms into the body, we have a period of incubation usually of about two weeks before the disease manifests itself; occasionally, though, only as many days.

The immediate effect of the poison from the malaria is first its destruction of the red blood corpuscles, an increase in pigment; irritative changes are set up in the liver, spleen, and stomach; nerves begin to cry out from being fed by the impure blood, and innumerable neuralgias and splenic pains are the result. Of all the tissues of the body, the liver and spleen seem to be the most affected by these blood changes. The pigmentary deposit in them sets up a hyperplasia or hypertrophy which becomes chronic; after a time anæmia or hydræmia is a final result of this poisonous action upon the blood and system.

While the true cause of malaria is not positively known to be any of the germs we have referred to, and our absolute knowledge on the subject is very meager, we are more certain about conditions which regulate its production and spread—a certain amount of decaying vegetable matter, either on the surface or in the soil.

Moisture and an average degree of temperature, above 60 F., is essential to the production of malaria. There is not much to be dreaded from swamp, or marshy country, constantly submerged with either fresh or salt water, but when such places are dried out by the direct rays of the sun, or where they are filled with partly fresh and partly salt water, the miasm seems to be great. Low, bottom lands that are subjected to overflow, as well as new cultivated fields recently cleared of their swampy growth, railroad excavations, canal work, and anything that disturbs the soil when there is sufficient warmth and moisture is liable to generate a malarial poison, which affects the exposed inhabitants. Rivers have been known to carry malaria in their water for a considerable distance; it is also air borne, and may be carried by the wind great distances.

The poison is quite ponderable, as proven by its being carried four miles to the crew of a ship anchored that distance from the coast where malaria was prevailing, thus infecting the passengers upon the vessel.

The above mentioned are the conditions which are helpful to the propagation of the fever. Circumstances which are inimical to its production are high latitudes. It is rarely found beyond 63° north, and 37° south latitude. The poison is rarely developed above an altitude of one thousand feet above the level of the sea. Good drainage is an essential factor in the eradication of malaria. Cold acts as beneficially in preventing malaria, as it does yellow fever, and whenever the freezing point is reached, even for one night, there is an end to existing malaria; when the thermometer reaches 60° F. it may be de-

veloped again. The poison is most virulent between the suns; night air should be avoided in malarial climates. The malarial poison most likely enters the system either through the respired air, or through foul drinking water, or bad food. After introduction into the system it is capable of reproduction.

Weak, anæmic patients are more liable to the influence of the poison than stronger ones. Women and children are hence more liable to have it than men, when equally exposed. One attack predisposes to another; change of location from a swamp to a hill country is as liable to bring out the latent malaria, as a move from hill to a malaria region would be. The remarkable exemption of residents of New Orleans from malarial fever seems strange, yet it is true. It would seem that New Orleans would be the hot bed for its propagation, yet the facts are that we are remarkably exempt from acute malarial fevers here. The paved condition of the streets, the open gutters to ventilation, sunlight, rain and flushing may have the effect of destroying the poison, or preventing its rising from the soil. Pavement would seem to act better in this way than the green sod, which we know to be antagonistic to the production of malaria. Our open gutters are also greatly in our favor. That New Orleans is practically exempt from regular chills and fevers may not be generally known, still it is true.

The faculty in Tulane University have to depend upon cases imported from the country to teach the medical classes that assemble here annually, the clinical history of intermittent fever. Other types of malarial fever seem to be more common here. The absorption of the poison by the sunflower and the eucalyptus tree are myths handed down from our ancestors, like many other medical superstitions, and are without foundation, either in fact or reason.

The natural propylaxis which would suggest itself to persons going into malarial climate would be to keep indoors after sundown; never to go out upon an empty stomach; not to drink the water of malarial regions till it is filtered or boiled; not to drink alcoholic stimulants, or to eat rich, indigestible food in great quantities, as both congest the liver and irritate the stomach, rendering the subject much more liable to the action of the malarial poison. The highest and best drained point, in any given location, should be selected for residences. As quinine is the best agent with which to break the fever, small tonic, 3-grains doses, three times a day is the most effectual way of keeping it off.

The treatment of malaria cannot be summed up in the giving of quinine of some authors, for your quinine, unless given in the proper way and at the right time, is more apt to act as an emetic than a specific.

We must view the pathological state of engorgement and congestion of the spleen and liver, brought about by the action of the poison. The first rational object in the plan of treatment is to relieve this engorgement, which is usually accomplished by 2½ grains each of calomel and soda, night and morning, followed by saline purge. It is rarely necessary to exceed this dose, though in obstinate cases it might be doubled, but the days of 20 and 60-grain doses of calomel are numbered, much to the credit of the profession. Every patient should be asked before giving calomel, "Have you ever been salivated?" If yes, we should resort to compound cathartic or some other vegetabl pill, or laxative, and not run the risk of a repetition of the disagreeable experience of salivation. Free purgation in the beginning is absolutely necessary, and if one course of medicine does not accomplish this, it should be repeated. Flushing the rectum with hot glycerine and boracic acid solutions aid the action of purgation very much.

To mitigate the chill stage or to try to abort it, you can use 30 drops of chloroform in milk, a dose of morphine and atropia, either internally or hypodermically. A warm mustard or salt water emetic during this stage clears the stomach of any objectionable contents and brings about a general relaxation. The next symptom to combat is pyrexia. Sponging with cold or tepid water is very grateful. The evaporation of water left on the surface consumes considerable of latent heat. The head should be enveloped in several thicknesses of towels, wrung out of ice water, or internally—

℞.—Tr. aconiti..... gtt.xvj.
Spts. nitre..... ℥j.
Syr. scillæ..... ℥j.
M.—S. Teaspoonful every hour or two for adults,

is an old but reliable combination.

Newer remedies on this line belong to the coal-tar group; one is about as efficacious as the other. Five to 10-grain doses of acetanilide, with same amount of bicarb. soda, repeated as often as necessary. Perhaps 10 to 15-grain doses of antipyrine or phenacetine might act a little more promptly. These remedies are best given in whiskey or brandy. As soon as the temperature falls and the pain ceases these agents should also be stopped. It is beneficial to combine them in equal parts, to be given with the quinine in capsules. This plan allows you to begin the quinine earlier, prevents the disagreeable head symptoms, and helps to control the splenic and other neuralgias. After caring for your patient this far, the matter of keeping the next paroxysm off is important, for in the ordinary malarial fever we ought not to allow our patients to have the second chill. Quinine is our sheet-anchor here, and if you can get the bowels well opened, and the adult patient to absorb 20 or 30 grains of quinine sulphate before the next paroxysm, it is pretty sure not to return. Irritability of the stomach and non-absorption of the remedy, or the substitution by our druggist of some of the weaker alkaloids, an imprudence of the patient is the cause of our failure.

The yellow or greenish viscid secretion of the stomach commonly known in these attacks must be vomited before you can secure the good effect of any remedy. A 10-grain dose of the quinine as soon as the sweating stage commences ought to be given, as it helps to eliminate the poison; this followed up by a 5-grain capsule, so as to get in the 30 grains before the next chill. If the stomach is too irritable to retain it, double the amount, by the rectum, suspended in milk or cream acts as well; or one-half the dose used as hypodermic solutions, in ether, if it can neither be kept by the rectum nor mouth. The liability to form abscess is not so great after the ether as the acid solution of quinine. In the pernicious variety, or where you see the patient only an hour or two before the chill is expected, this is a prompt method of bringing him immediately under the influence of the drug. As between large and small doses, I would prefer the latter; 5 grains of quinine in the simple intermittent. Our use of quinine is empirical, as we do not know how it acts. It is as near a specific in this disease as we have in medicine. Salicine, piperine, strychnine, arsenic, and many other drugs, have been recommended in malaria. I consider them all inferior to quinine, to act better as tonics, and in the masked or chronic forms, than as specifics in the inter and remittent variety.

When quinine is not borne well, we might try some other alkaloid of the bark. Piperine is occasionally given as a pill. Strychnine with iron as a tonic, or—

℞.—Bichloride mercury..... gr. j.
Tr. ferri chlor..... ʒj.
M.—S. Ten drops three times daily in water.

Another agreeable way of giving iron for the anæmia, combined with quinine and arsenic, is—

℞.—Ferri et quininæ citratis..... ʒij.
Liq. potass arsenitis..... ʒij.
Syr. limonis..... ʒiv.
M.—Sig. Teaspoonful three times daily.

Iodide of potassium, as an alterative, in 5-grain doses, is highly recommended in enlarged spleen and liver; if it disagrees with the stomach after giving it in milk, stop it at once. Nitrate of potassium, in from 15 to 20-grain doses, three hours apart, has failed in my hands to produce the good effect claimed for it by some.

Vomiting is one of the most obstinate symptoms in some cases. I usually encourage it by salt or mustard water until the emesis is free; then with—

℞.—Hydrochlo. cocaine..... gr. ij.
Milk of magnesia..... ʒj.
Aq. lauro cerasi..... ʒj.
M.—S. Teaspoonful every hour or two for nausea.

Or—

℞.—Morphiæ sulphas..... gr. iss.
Sodæ bicarb..... ʒj.
Acid carbolic..... gtt. iv.
Aq. menth. pip..... ʒij.
M.—S. Teaspoonful doses, two hours apart, with mustard over the stomach and crushed ice by the mouth.

This will check the most obstinate cases. You need not try any tasteless syrup of quinine; it does not exist.

"You may licorice, yerba santa, and tannate if you will,
But the bitter of quinine will hang around it still."

Equal parts of pulv. ginger, syrup of tolu, saccharine, have all been used to disguise its taste. If it cannot be taken

in capsules or with any of the agents which partially disguise it, it is best given by the rectum, in suspension, as mentioned before.

As the progress of development goes on in the country, malaria becomes less and less common; with improved sanitation and a better knowledge of its pathology, we are learning to handle it better. Some of the M.Ds. in the Mississippi Valley speak of the hematuric variety in the lightest way, claiming to cure it by emulsions of turpentine as readily as you can cure any other ordinary disease with a simple remedy. I, personally, have no experience with turpentine in the hematuric form of the disease, and only hope the discovery that the swamp M.Ds. have made will hold out against all emergencies in the future.

A CASE IN CEREBRAL SURGERY.

OPERATED BY W. S. HUSELTON, M.D., VISITING SURGEON TO THE ALLEGHENY GENERAL HOSPITAL.

By MARK A. RODGERS, M.D.

AN extremely interesting case in cerebral surgery came under the writer's notice during August of last year, which will doubtless be of interest to admirers of modern surgery.

Miss H., aged fifty-seven years, occupation domestic, was admitted to the Allegheny General Hospital, July 27, 1891.

Family history was negative, with the exception that in the case of one sister, a hysterectomy had been performed, from the effects of which she died, for what was —presumably from subsequent developments—a malignant growth.

Personal History.—She had the ordinary diseases of childhood, but suffered from no sequelæ. On her admission to the hospital she was suffering from severe pains in the head. Her temperature was normal but pulse slightly accelerated. Her menstruations had not ceased, and she complained somewhat vaguely of metorrahagia and general menstural disturbance, but would permit no vaginal examination. According to the statements of her friends, about five years previous to her admission, a tumor had appeared above and behind her left ear. She had severe headaches and her memory began to wane. The tumor increased in size, her mind became more and more impaired, and her headaches more severe.

On examination, a tumor was found about the size of a goose-egg, extending from the lambdaidal suture immediately behind the mastoid process, to a point midway between the parietal eminence and the external occipital protuberance. On palpation it was extremely painful, semifluctuating, immobile, and adherent to the tissues of the pericranium. An exploring needle was introduced with negative results, but its withdrawal was followed by an unusually profuse hemorrhage (the size of the puncture considered) and slight febrile reaction.

On August 18, an operation was decided upon for the removal of the growth. The patient was etherized and the part prepared with due regard to asepsis. An incision large enough to admit of enucleation was followed by a most extraordinary hemorrhage, which was temporarily uncontrollable. The tissues of the scalp were dissected from the tumor with great difficulty, the hemorrhage meanwhile continuing. The capsule of the growth was then ruptured and proved to be the membranes of the brain which, with the tumor, had eroded their way through the bones of the skull. The membranes were separated and the mass carefully removed to a plain slightly below the level of the normal cortex. At this point the hemorrhage became appalling. The blood jetted from innumerable arteries, and the patient went into a state of profound collapse. The anæsthetic was suspended and hypodermic injections of strychnine, digitalis, ammonia and brandy were administered. The membranes and tissues of the scalp were closed with interrupted catgut sutures a hot bichloride compress applied, and the patient removed from the table pulse less, and with death apparently imminent.

Hypodermics of brandy were administered every fifteen minutes for one hour; at the end of that time the patient was able to swallow, and f℥ss of brandy was exhibited. Brandy was given during the night in considerable quantities and patient rallied well. Next morning her temperature rose to 102° F., with pulse 118; same evening, temperature $101\frac{4}{5}$—pulse 110.

On the 20th, symptoms of crossed hemiplegia were incipient, the left eye drooped and the right arm and leg, although showing no decided paresis, were markedly

weaker than those of the opposite side. The tongue, on protrusion, inclined towards the left. These symptoms soon disappeared, however, and on the morning of the 26th, patient's temperature was normal, with pulse 88. The wound healed by first intention, and on the 30th she was permitted to sit up.

Discharged September 18, with no apparent return of tumor and in good health, although as regards her mental condition not much improved.

The aperture in the skull, through which the tumor projected, was ovoid in shape, having, perhaps, the diameter of a hen's egg, and the edges rough and serrated. In the excitement attendant upon the operation, the neoplasm was forgotten, and therefore no sections were made for microscopical study; but from the position of the growth, one is safe in making the diagnosis glioma or glio-sarcoma.

Since this patient has left the hospital, we have lost track of her, and consequently are at present unable to make any statement as to the ultimate result.

HISTORY AND THERAPY OF CASCARA SAGRADA (RHUMNUS PURSHIANA. DE CANDOLLE) IN SCIATIC AND SOME OTHER AFFECTIONS.

By T. G. STEPHENS, M.D.,
SIDNEY, IOWA.

THE circle of science has grown too wide to be compassed by any human intellect, however great. The man who knows the most will be free to admit that all his attainments are limited and humble, when compared with what he does not know. A single branch may afford a field for the exercise of the most vigorous faculties through the longest life. *Ars longa vita brevis* was the first aphorism of the father of medicine, in reference to his profession, more than two thousand years ago. How much more true is it of the science of the present day, enriched by the discoveries of so many successive ages! The mind cannot embrace all, but in the midst of a countless multitude of studies must fix upon those which promise the highest reward. Goodness, it may be affirmed, is better than greatness; purity is more excellent than power; virtue than knowledge. As those evils which touch nothing but the body of fortune, according to the fine sentiment of the heathen philosopher, are trivial in comparison with those which affect the soul, so those studies are above all others in value, which, while they strengthen the mind, purify the affections, and while they store it with knowledge, fortify it with just and elevated principles. Among the branches of human knowledge which have given efficiency to labor and multiplied the comforts of life, therapeutics holds a conspicuous place.

On the 24th day of December, 1891, I was invited to see Miss X, fifty-five years of age, who had been suffering from sciatica for five consecutive weeks, the pains radiating from the sciatic notch and extending along the ham and peroneal surface of the right leg to the ankle, and at times was very severe, completely disabling her from walking. After diagnosing the case, my first thought was to give her a hypodermic injection of morphine and atropine, but, my syringe being out of order, gave her half a grain of morphine as a temporary expedient to relieve the present suffering, leaving a few more doses in case of the severe pain returning, and ordered the extract of cascara sagrada every six hours, commencing with 5 drops, and increasing 1 drop each day until free purgation was induced, then to give a dose of morphine, discontinuing the former for twenty-four hours. The next day, about the same hour of my visit, I heard from her, and that she was feeling better, could make slight motion with her leg without pain; but the family thought that I had better call and see her during the next day, which I did, and found her a little feverish, but did not change the course of treatment, as the pain was still ameliorating. The next day I called again, and found an abatement of both the fever and paroxysms of pain. During the fourth day the medicine operated on her bowels freely a number of times; was discontinued, and a dose of sulphate of morphine given, which had a happy effect in controlling them. After an omission of twenty-four hours the cascara was resumed as before, commencing with the original dose, increasing the medicine as before, and continuing the treatment for a few days, when it was suspended, as she appeared to be cured, and has remained well up to the present time, six months. The only auxiliary used in connection with the cascara treatment was massage with the balls of the fingers two

or three times a day, following the course of the sciatic nerve and venous circulation from the ankle to the hip. This medico-therapeutic procedure is a great help in such cases, as well as in many other ailments, and has led to the manufacture of many ingenious instruments for that purpose, a few of which my be mentioned here: *Percuteur*, or hard mallets; *roulettes*, or rollers of wood; the *batoir elastique*, elastic muscle beater; the "switch electrode," which is used in connection with electricity.

The cascara sagrada, like many other medicinal agents, has received a variety of synonyms, as chitten bark, sacred tree bark, shittim wood, beurberry, bear wood, etc. Only the bark is used in medicine, which is from one-twenty-fifth to one-eighteenth of an inch in thickness. It was first discovered by Dr. Bundy, of Calasa, California, who used it in his practice. The Aborigines, however, had used it in domestic practice prior to this time. It grows to be a small tree, sometimes attaining the height of thirty-five or forty feet, but averaging only about twenty feet; its maximum diameter being eighteen inches, but more frequently twelve. Its name was given in honor of the renowned Prussian botanist, Frederick Pursh, who, in 1814, gave it such a description as to fix its place in botany. The plant belongs to the natural order, *rhamanaceæ*. The genus itself comprises about sixty species, only seven being met with in North America; five of these on the West Pacific slope of North American, especially California. In 1877 Parke, Davis & Co., Detroit, Michigan, introduced the rhumnus purshiana to the medical profession, since that time it has been extensively used in this and foreign countries, in some of which it has been made officinal, and its principle use has been that of a tonic-cathartic and aperient, its *modus operandi* being different from any other remedy with which we are acquainted. The laxative properties of the rhumnus purshiana are said to reside in the resins present, while the tonic effects are due to the bitter crystalline principle. In collecting the bark of this plant for medicine, great care should be used in order to get the bark of plants whose roots are well covered with soil, in order to have good nourishment; if they are not, the development of the plants will be poor and the bodies unsound. In many respects the rhumnus purshiana is like the genus copaifera. Even when not adulterated its medicinal virtues are not apt to be uniform, as locality and age are liable to make a difference in its physical properties, even its chemical composition and character, thickness of the bark, etc.

Therapy.—In several cases of *uscaris vermicularis* I have had the best of results from the administration of cathartic doses of the fluid extract of cascara sagrada. I have used the cascara sagrada in a number of cases of chronic rheumatism where the usual remedies in this affection had failed to give satisfaction, and with excellent results. Dr. L. P. Barber (*Medical Summary*, February number, 1888), says: "As an anti-rheumatic, I believe this remedy has come to stay." James M. Hale, M.D. (*Medical Summary*, November, 1888), says: "I have now treated ten cases of rheumatism with cascara sagrada with greater success than I have ever treated ague with quinine. From the standpoint of the clinician, cascara seems to possess certain properties which bear a striking similarity to the properties belonging to both ipecac and calomel. As regards its influence on the blood, cascara accomplishes more than ipecac, but it is less a stimulant to the nepatic function than that drug—a loss which is made up by its laxative effect, in which respect it strongly resembles calomel." He further says: "In small doses, repeated at short intervals, cascara is a laxative; but little, if any, griping is produced, and, unlike rhubarb, is not astringent when used in this manner. On the contrary, the judicious use of the drug seems to favor the return of the healthy secretions of the entire alimentary tract, and, as a consequence, the stools are large and soft in consistence, and that peculiar burning sensation caused by the exhibition of aloes, is altogether wanting. While aloes increases secretion from its irritant action, cascara more nearly imitates nature, the watery portion of the blood being removed from the system, thus lessening the tendency to pelvic congestions."—Dr. John Aulde, in the New York *Medical Journal*, June 28, 1890. J. V. Bustin, M.D., Belle Union, Ind., says: "I have used cascara sagrada in twelve cases of chronic articular rheumatism and have found marked relief in all except one."—*Medical World*, January, 1889. Dr. R. C. Cobham, of Dayton, Ohio, in speaking of the use of

cascara sagrada in rheumatism, gives a number of cases which he has treated with this remedy.—*Medical Summary*, December, 1888. T. Goodwin, M.D., of the U. S. Marine Hospital Service, according to an article published in a recent issue of the New York *Medical Journal*, claims to have accidentally discovered in cascara sagrada a specific against rheumatism; exhibiting the drug first upon himself, he says: "I have since used the cascara in fully thirty cases, with the exception of three or four, in which there was a syphilitic taint, I have obtained the most satisfactory results. I commenced with 1 cc., t. i. d., and have so far never had to increase it beyond 1.5 cc., and even to this extent in but two cases. I have seldom had to wait beyond twenty four hours for beneficial effects." Further on in his article he says: "In many cases of chronic malarial poisoning with relapses of chills and fever, which quinine or any other alkaloid of Peruvian bark would only check for the time being and never establish a permanent cure, we have been in the habit for a number of years, in all such cases, to commence our treatment by first administering a sufficient quantity of quinine to check the chills as soon as possible, and at the same time would prescribe, if the patient's bowels were constipated, fl. ext. cascara sagrada sufficient amount to procure several free evacuations during the following day; this would be followed with from 15 to 25 drops of fl. ext. gentiana quinque flora, combined with sufficient fl. ext. cascara sagrada t. i. d. to keep the bowels in a soluble condition; this treatment, along with the ordinary doses t. i. d. of elix. iron, quinine and strychnine in all anæmic cases, would be continued for several months or longer, until all traces of the malarial poison had apparently disappeared from the system."

AN EMERGENCY CASE.

By WM. F. WAUGH, A.M., M.D.

SOMETIMES the doctor is needed in a hurry; and when he gets to his patient he finds that his medicine is also needed in a hurry. It may be at night, when the drug store is closed; or it may be that there is no time to send for the needed articles. For many reasons it is a good thing to have on hand a case stocked with all the necessities one is likely to need in any of the cases that are apt to require prompt attention. I must disclaim at the outset any notion of making a list to suit any sized drug-case. I wish rather to consider the emergencies that are likely to require quick aid, and the best remedies for such conditions. As to the number, that is a secondary consideration.

As the practice of a physician includes all the departments of medical science, it is obviously essential that the emergency case should contain the essentials for medical, surgical and obstetrical emergencies, as one does not want a separate case for each class.

The cases most likely to require prompt aid are as follows:

Abortion.—Morphine to check; ergot to control hemorrhage; a tampon rubber bag; chloroform.

Alcoholism.—Pilocarpine to sober up; tartar emetic to control frenzy; strychnine for heart failure.

Anæsthesia Collapse.—Digitalis hypodermically; trinitrin, strychnine.

Angina Pectoris.—Trinitrin, acetanilide; morphine to relieve paroxysms.

Apoplexy.—Aconite, to control pulse; elaterin, to purge; strychnine, for heart failure.

Asphyxia.—Trinitrin, strychnine hypodermic.

Asthma.—Trinitrin, morphine, apomorphine, chloroform, atropine, for paroxysms.

Bronchitis, Capillary.—Apomorphine, to cause vomiting; chloride ammonium, mustard leaves.

Burns.—Aristol in oil or ointment.

Calculi, Biliary or Renal.—Chloroform, morphine, to relieve pain.

Cerebral Congestion.—Acetanilide, elaterin, to purge.

Cholera Infantum.—Zinc sulphocarbolate, morphine, strychnine, blister back of ear; bismuth with coffee or brandy, supplied by family.

Cholera Morbus.—Morphine, hypodermically; zinc, bismuth.

Colic.—Chloroform, camphor, or morphine, internally; ipecacuanha emetic.

Coma.—Pilocarpine hypodermically; elaterin, to purge

Convulsions.—Chloroform, pilocarpine, morphine, brandy, atropine, will fill all indications.

Croup.—Apomorphine, as emetic; morphine, aconite, for first stage; intubation

for second; ipecacuanha with cold compresses for catarrhal form.

Delirium.—Tartar emetic for frenzy; hyoscine for most forms; coffee, cocaine for debility; acetanilid for fever.

Delirium Tremens.—Cocaine and capsicum, hyoscine.

Diarrhœa.—Morphine, zinc sulphocarbolate, camphor, bismuth.

Diphtheria. — Pilocarpine, antiseptic lotions.

Dysentery.—Pilocarpine, ipecacuanha, zinc sulphocarbolate, bismuth, morphine, with hot enemas; camphor and strychnine for collapse.

Dysmenorrhœa. — Acetanilide, gelsemium, hot injections.

Dyspnœa.—Chloroform, apomorphine, trinitrin, morphine, digitalis.

Dysuria.—Morphine, camphor.

Epistaxis.—Ergot, digitalis, aconite, elaterium, ipecacuanha, hot water to the feet, ice to nose and back of neck, tampon with rubber bag.

Erysipelas. — Pilocarpine, digitalis, aconite.

Fever.—Acetanilide, aconite, ipecacuanha, quinine.

Gastralgia.—Morphine, chloroform internally; bismuth.

Glossitis.—Incisions, ice, pilocarpine.

Glottis Œdema.—Elaterium, puncture, intubation, hot or cold water to neck.

Gout.—Colchicine.

Hay Fever.—Trinitrin, morphine, chloroform, pilocarpine.

Headache.—Acetanilide, zinc sulphocarbolate, aconite, atrophine, trinitrin.

Heart Palpitation.—Digitalis, strychnine, aconite, camphor, colchicine, hyoscine, atropine.

Hemorrhage.—Digitalis, ergot, aconite, cocaine locally, rubber bag tampon.

Hernia.—Chloroform, morphine, apomorphine, ipecacuanha, stand on head, and taxis.

Hydrophobia.—Pilocarpine, hyoscine, chloroform.

Hysteria. — Chloroform, ipecacuanha, elaterium, camphor, trinitrin.

Insomnia.—Hot water, hyoscine, atropine, camphor, morphine.

Hiccough.—Chloroform, apomorphine, pilocarpine.

Intestinal Obstructions. — Morphine, chloroform, hot enemas.

Labor.—Chloroform, morphine, ergot, digitalis, quinine, strychnine, pilocarpine, brandy.

Laryngismus Stridulus.—Chloroform, trinitrin, camphor, atropine, aconite, ipecacuanha, apomorphine.

Lumbago.—Morphine, pilocarpine, aconite, camphor, ammonium chloride, chloroform locally, hot water, acetanilide.

Mania.—Atropine, hyoscine, camphor, morphine, tartar emetic, digitalis, gelsemium, cold water.

Measles.—Acetanilide, aconite, ipecacuanha, morphine.

Meningitis.—Aconite, gelsemium, tartar emetic, morphine, pilocarpine, elaterin.

Myalgia.—Ammonium, chloride, atropine, gelsemium, aconite.

Neuralgia.—Acetanilide, gelsemium, atropine, camphor, cocaine, morphine, quinine, chloroform, hot water.

Odontalgia—Otalgia.—Brandy locally, chloroform, morphine, ipecacuanha, acetanilide, cocaine locally.

Orchitis.—Atropine, ammonium, chloride or digitalis locally, cold or hot water, bismuth.

Pleurisy.—Pilocarpine, morphine, elaterin, tight bandage, aconite.

Pneumonia.—Pilocarpine, aconite, tartar emetic, digitalis, morphine, acetanilide, quinine, cocaine.

Poisoning. — Apomorphine, ipecacuanha, tartar emetic, as evacuants; morphine, chloroform, to relieve pain; acids, alkalies and demulcents can be obtained easily; the chemical antidotes are rarely of any use, as the damage is done before they can be applied.

Rheumatism. — Acetanilide, aconite, gelsemium, morphine.

Scarlatina.—Aconite, acetanilide, gelsemium, pilocarpine, antiseptic lotion.

Sciatica.—Acetanilide, morphine, atropine, gelsemium, ammonium, chloride.

Shock.—Camphor, brandy, trinitrin, strychnine.

Stings and Bites of Bees, Snakes, etc.—Pilocarpine, brandy, camphor, strychnine, alkalies or caustics locally.

Sunstroke.—Acetanilide, for hyperpyrexia; brandy, camphor, strychnine, for heat exhaustion; atropine for intermediate cases.

Syncope.—Trinitrin, brandy, camphor, atropine, chloroform internally, cold water.

Uremia.—Pilocarpine, elaterin, morphine, digitalis, colchicine.

Vomiting.—Bismuth, chloroform, internally zinc sulphocarbolate, morphine, ipecacuanha, cocaine; total abstinence

from all ingesta for some hours, blister to epigastrium.

Wounds.—Digitalis, ergot, for hemorrhage; brandy, camphor, trinitrin, to resuscitate; aristol antiseptic lotion to dress; aconite, acetanilide for fever.

We find that in this list we have enumerated the following remedies, of which we have also suggested the form most appropriate, and the quantity of each that should be provided:

Acetanilide, 5 gr. pills or tablets	25
Aconitine, $\frac{1}{100}$ gr. granules or tablets	100
Ammonium chloride, 5 gr. tablets	25
Apomorphine, $\frac{1}{10}$ gr. hypodermic tablets	50
Aristol in powder, grains	30
Atropine, $\frac{1}{100}$ gr. granules or tablets.	100
Antiseptic tablets	25
Bismuth subnitrate, 5 gr. tablets	25
Brandy, 4 oz. bottle	
Camphor, ½ gr. coated pills	25
Chloroform, 2 oz. bottle	
Cocaine hydrochlorate, ½ gr. tablets	25
Colchicine, gr. $\frac{1}{100}$, granules or tablets	25
Digitaline, $\frac{1}{60}$ gr., hypodermic tablets	100
Elaterin, gr. $\frac{1}{8}$, tablets or granules	50
Ergotine, gr. 1 tablets or pills (Bonjean's)	25
Gelseminine, gr. $\frac{1}{100}$, granules	50
Hyoscine, gr. $\frac{1}{100}$, granules	25
Ipecacuanha, gr. 1, granules or tablets	50
Morphine, $\frac{1}{4}$ gr., hypodermic tablets.	100
Pilocarpine hydrochlorate, $\frac{1}{8}$ gr., hypodermic tablets	25
Quinine, hypodermic tablets	25
Strychnine, $\frac{1}{20}$ gr., hypodermic tablets	50
Tartar emetic, $\frac{1}{2}$ gr., tablets or pills.	25
Trinitrin, $\frac{1}{100}$ gr., granules	100
Zinc sulphocarbolate, $2\frac{1}{2}$ gr., pills	25

This comprises a list of twenty-four bottles of pills or tablets, with small bottles of brandy and chloroform. The quantities suggested are small, as it is supposed that the case will be refilled promptly. The doses are made large so that full doses can readily be given, and where small ones are needed the large can be easily divided.

☞ Hypodermic tablets are suggested whenever practicable. In most cases these can be given in hot water, by the mouth.

Besides these, the case should contain the following articles:

Rubber bag for vaginal tampon, with tube to fill with water.

Pocket case of instruments. Stocked with all necessaries.

Adhesive plaster.

Bandages.

Jack-knife.

Tourniquet.

Hypodermic syringe.

Blister plaster.

Mustard leaves.

Intubation tubes.

Combination syringe.

Sponges.

Nail brush.

Thus armed, the physician can snatch his bag, and rush off to encounter any emergency that he is likely to meet; medical, surgical or obstetrical, with perfect confidence in the adequacy of his resources.

Treatment of Seborrhœa of the Hairy Scalp.—Dr. Saalfeld (*La Semaine Médicale*, No. 29, 1892) recommends the following treatment of seborrhœa of the hairy scalp:

Rub the scalp every evening with an alcoholic solution of green soap, then pour a little tepid water on the head, to thin the soap. Leave this on the head for a few minutes, wash the hair with tepid water, and, after having dried the hair well, rub the following pomade into the scalp with the finger or a small brush:

R.—Sublimed sulphur	gms. 3–5 (grs. xlv–℥j¼.)
Lanolin	gms. 3 (grs. xlv.)
Benzoated lard	gms. 30 (℥j.)

This ointment prevents the formation of crusts and pellicles in excess. If the patient complains of itching, which is present in nearly every case, then one may add 30 centigrammes to 1 gramme (5 to 15 grains) of salicylic acid, previously dissolved in a sufficient quantity of rectified alcohol. The washings and the applications should be made every day, and, when improvement sets in, every eight to fifteen days.—*Lancet-Clinic.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

WM. F. WAUGH, A.M., M.D., Managing Editor.

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THE PRESENT POSITION OF ANTISEPTIC SURGERY.

FROM time to time it is not only interesting, but is also a necessity, to take an occasional retrospective glance through the near past, and, as it were, compare notes, and see where we stand.

Just now, that sufficient time has elapsed, we may inquire, What is the precise, definite position of antiseptics in surgery? The medical side of the question we will give our attention to, later.

We believe, from what can be gathered from the latest literature on the subject, that antiseptic surgery, as taught and practised as recently as five years ago, is now something of the past.

When Lister introduced the spray, and argued with great force the importance of purifying the atmosphere of the operating-room, and seeking out the stray germs, lodged in sundry recesses of one's apparel or surroundings, Lawson Tait, with stinging sarcasm, recommended that the nozzle of the apparatus would do the most good, when pointed out, through the window. The spray went.

Reports commenced to come in that antiseptics must be eschewed in the surgery of the peritoneum. It was discovered that in traumatism penetrating the skull and involving the brain, when treated antiseptically, were attended with a terrible mortality, through a consecutive, irritative meningitis. Antiseptic irrigation of the pleura, in empyema, is no longer employed by the French surgeons.

Bichloride solutions, when used in amputations, though they favor prompt union, are said to cause, very often, painful, useless stumps, through an insidious osteo-myelitis which they excite in the cellular elements of the cancellous bone substance.

Antiseptics—or, rather, chemical solutions—were practically condemned by the American Surgical Convention of 1891. Prof. Chiene, a townsman of Lister, sounded the death-knell of antiseptics, in Great Britain, when he announced and demonstrated that chemical solutions of any description were foreign substances, irritants, and had no place in healthy tissues.

This, indeed, is a sad commentary on what was taught but yesterday, as a cardinal doctrine.

Morell Mackenzie narrowly escaped imprisonment at the hands of his unfriendly German confrères, because he did not boil or pickle his spatula, every time he used it on the Prince's tongue.

Although the above, must be a humiliation to those who pin their faith absolutely, to scientific medicine, it will teach a useful lesson to many, who are too strongly inclined to dogmatize.

SANITATION A PROTECTION OF THE INDUSTRIAL CLASSES.

THE recently terminated French Workmen's Sanitary Congress certainly occupies a new field, and has an important mission to fulfill. The rich who occupy comfortable homes and can supply all their reasonable physical wants, are altogether too oblivious of the deplorable hygienic state of most of the industrial classes.

We all know with what unequal conditions they struggle. They are exposed to the dangers of inclement weather in winter, and over-heat in summer. They work in occupations which are destructive of health and dangerous to life. They are housed in tenements and districts which are laid out and constructed in utter disregard of the decencies and comforts of life and the preservation of health. They are exposed almost without the shadow of protection to the most fearful epidemics which visit humanity. They are entirely at the mercy of speculators in provisions in regard to the most swindling and dangerous adulteration of their food supply. In addition to all this, their constant drudgery leaves them so little time or energy for study that they are necessarily ignorant of the fundamental principles of personal hygiene.

Now this is all wrong. How should it be righted?

1. Enlarge the health department of cities, and give them sufficient means and authority to keep the city constantly in the best sanitary condition, and to suppress contagious diseases.

2. Enact such laws as will effectually prevent rapacious landlords from crowding the poor together in unhygienic tenement districts, or erecting unsanitary dwellings in any district.

3. Enforce more strictly the laws in regard to the inspection of factories and the general conditions of labor. Make proprietors financially responsible for expenses and loss of time incurred in sickness by their employés, due to their disregard of proper conditions of labor.

4. Where a pure and wholesome food supply cannot be secured, establish a public supply at actual cost until private dealers are willing to yield to the requirements and mend their ways.

5. Extend to the fathers and mothers of families every possible facility, by means of circulars, tracts and lecture classes, of becoming well-informed in regard to the principles of dwelling sanitation, diet and personal hygiene for themselves and their children.

The objection will be made by some that this is in the direction of an enlargement of public functions. Well, so be it. Who is opposed to our continuing in the line of social progress? Or who thinks that we have reached perfection in the organization of society? J. J. T.

Annotation.

IMMUNITY FROM CONSUMPTION PRODUCED BY USE OF TOBACCO.

WE have heard the theory frequently advanced that the use of tobacco, especially by smoking, rendered the habitué immune from consumption of the lungs. It now comes out in the shape of a formal paper read before the Jackson County, Missouri, Medical Society, by Dr. Theodore Griffin, of Kansas City, and published in the *Pacific Medical Journal*. We should like to hear the views of the readers of this journal expressed upon the subject, fortified by whatever observations they have made in the course of their experience.

Book Notices.

HISTORY OF HIGHER EDUCATION IN MASSACHUSETTS. By GEORGE GARY BUSH, Ph.D.

SOUTHERN WOMEN IN THE RECENT EDUCATIONAL MOVEMENT IN THE SOUTH. By REV. A. D. MAYO, M.A.

These are two very interesting volumes, sent out by the Bureau of Education, Washington, D.C.

CARDIAC OUTLINES. By WILLIAM EWART, M.D., Cantab., F.R.C.P., etc. London, England. Cloth; 165 pages; profusely illustrated. Price, $1.50. Putnam's Sons, N. Y.

We have carefully examined this work, and find it eminently adapted to the use of those who would like to master the fundamental principles of cardiac diagnosis.

The Medical Digest.

THE BEST FROM THE GERMAN JOURNALS.

(Translated by HERMAN D. MARCUS, M.D.)

CALCULI IN THE PREPUCE.—Dr. Beller (Krankenhaus Moabit), reports a case of præputial calculi. Patient forty-five years old; tailor by occupation; has been always a sufferer of a constricted foreskin. He has had no venereal disease.

Since 1870 he has had, at different times, difficulty in urinating; also pain, turbid urine, etc. Some years later he noticed small stones in his urine, and at times a stone would occlude the opening in the prepuce and be only removed after considerable pressure. About that time he observed a hardening behind the foreskin, and soon urinating became very painful. Urine was cloudy and very foul smelling, subsequent circumcision disclosed the prepuce filled with one large stone, weighing over two drachms, and four smaller calculi of a combined weight of one-half drachm.

The stones were of a brownish-yellow color, and had a smooth surface. They were composed (chemically) of carbonate and phosphate of lime, uric acid ammonium and phosphate of ammonium-magnesia. No organic elements were found, xanthoproteic reaction was not present. The wound healed by first intention under the application of aluminium acetate. The treatment of the present cystitis was difficult. The meatus was constricted, and it was hardly possible to introduce a very small catheter, the stricture extending deeply in the urethra. It was, therefore, found necessary to make an external urethrotomy, and a silver self-retaining catheter was then introduced. The subsequent progress of the lesion was very lingering and not very satisfactory. The cystitis is, in a measure, still present.

—*Archiv f. Klin. Chirurgie.*

SALIPYRINE.—Dr. Argo (Bunzlau) has published a report containing his observations with the use of salipyrine at the insane asylum at Bunzlau. He found the very best results, and recommends the drug highly, preferring it to antipyrine. The taste of salipyrine is less astringent and not disagreeable. Its use is not accompanied by the disadvantageous symptoms of antipyrine. It is given in 15-30 grain doses, using 15 grains per dose, or 45 grains per die. It being not easily solved in water, it is advisable to put the powder on the tongue and wash it down with water.

For a number of cases hemicrania with intense pain, 15 grains of the drug were found sufficient to stop the pain. The same prompt action was noticed in headache due to alcoholic excesses, even in such cases in which antipyrine refused to act.

Acute diseases of the nasal mucous membrane with excessive secretion, though not cured by this drug, were greatly improved; the disagreeable sensibility and local symptoms were decreased, probably due to a diminished sensibility of the mucous membrane. A positive hypnotic action was also noticeable. The patient slept after taking 15 grains in the evening very well, and continued to sleep during subsequent nights as long as he continued the drug (15 grains per night), while as soon as the drug was discontinued he again suffered from insomnia.

Two cases of chronic articular rheumatism were thus improved, and one who had been bedfast for some weeks was soon able to leave his bed, while the other, who had taken for three days 45 grains (pro die) of this drug, complained of very little pain. He has also employed salol in a number of cases of influenza, and found a nearly specific action.

—*Therapeutische Monatshefte.*

DR. HITSCHMAN (Vienna) who has made careful experiments with salipyrine has had no such favorable results with it as Dr. Argo. He has noticed that large doses cause disagreeable sweats and gastric disorders.—*Marcus.*

THE SALOL TREATMENT OF ACUTE AND CHRONIC CYSTITIS.—Dr. B. Arnold (Stuttgart) has employed salol in cystitis and deducts as follows:

1. Salol makes the alkaline urine acid.
2. It removes the foul odor.
3. It clears the cloudy urine, the mucopurulent sediment is diminished, and becomes lighter and flocculent, disappearing finally entirely.
4. The amount of urine is generally increased.
5. The stomach retains this remedy very good, and for a considerable time; this

makes salol superior to other drugs employed in cystitis.

This property is probably due to the insolubility of this drug in the gastric juice, becoming only solved after it reaches the intestines and the pancreatic juice is added, dividing it in salicylic acid and phenol (*Rosenberg*).

6. It is an excellent adjunct in washes for the bladder, especially when only weak antiseptic solutions are borne.

Arnold does not claim salol as a panacea, but as an excellent remedy in acute and chronic cystitis, rivaling the best anticystitic remedies.—*Therap. Monatshefte.*

Paralysis Following Diphtheria. Dr. A. Baginsky (Berlin) reports his observations of 244 cases of diphtheria. Out of these 30 cases were accompanied by paralysis, and this occurring either during the second or fourth week of the disease, or still later. The cases developing paralysis during the first few weeks of the disease showed generally a paralysis of the soft palate, coëxisting at the same time with marked nephitis and cardiac weakness. The paralysis appearing in the later weeks of the disease extend over nearly all muscles, the paralysis of the diaphragm being especially dangerous. We find, then, complete loss of voice; hoarse, aphonic cough, with difficult expectoration; dyspnœa, with thoracic breathing, during which breathing the lower part of the thorax is raised; the abdomen appears sunken.

Baginsky describes the cardiac symptoms and draws attention to the acute swelling of the liver, which accompanies weakness of the heart muscle.

Very interesting is a case of pronounced Cheyne-Stokes respiration, which was cured through oxygen inhalations.

Hypodermic injections of strychnine ($\frac{1}{22}$ to $\frac{1}{16}$ per die) were frequently prescribed, but Baginsky was soon forced to desist with such treatment in the early paralysis with cardiac weakness, this treatment appearing to be directly dangerous.

He then confined himself exclusively to a nourishing diet, administering it, if necessary, with the œsophageal probang, prescribing also caffeine and iron preparations. He also employs at times inhalations of oxygen.

—*Centralblatt f. Klein. Medezin.*

Bronchncele. — Auerbauch recommends interstitial injections of acidum osmicum in the treatment of goitre. He injects into the tumor daily grain $\frac{1}{13}$ in solution, applies massage for about fifteen minutes, and uses internally iodide of potassium. After three weeks he noticed a decrease in the size of the tumor to about one-half, and the absence of all subjective and other symptoms.—*D. Med. Wochenschrfit.—D. Medizinal Zeitung.*

The Use of Cocaine in Operations for Mastitis.—Dr. Guillaume Rossier recommends the use of the following local anæsthetic in cases of suppurative mastitis, which call for operative interference:

℞.—Cocaine mur..... gr. iij.
Aquæ bromide (4 per cent.)..... ʒv.

At first a few drops are injected under the skin, then the needle (hypodermic) is introduced deeper, and the solution injected parallel with surface of the skin into the papillæ. About thirty seconds later the incision may be made.

—*Corr. Bl. f. Schweizer Aezt.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. Bing, M.D., Chester, Pa., Translator).

An extemporaneous preparation of simple character, of bismuth, glycerine, tr. catechu and water, has proved very serviceable as injection for gonorrhœa.

—Bing.

Meccrisse strongly recommends an infusion of coca leaves in the strength of 6 grms. to 100 grms. of water, as a preventive of sea-sickness (probably the wine would do as well).

—*L' Union Med. de Canada.*

For Simple and Impetigenous eczema.—Dazac uses the following ointments, first:

℞.—Acid boric pulv..... 1 decigrm.
Lard (benzoinated)..... 10 grm.

Second:

℞.—Acid boric pulv.,
Acid carbolic.....āā 1 decigrm.
Lard (benzoinated)..... 10 grm.

For anæmia he prescribes at the first:

℞.—Syrup iodide iron..... 250 grm.
Old rum..... 6–12 grm.

Or second:

℞.—Syrup of quinia,
Syrup bitter orange peel,
Syrup lactophosph. lime,
Syrup of punch..... āā 65 grm.

—*Jour. de Med. de Bordeaux.*

A NEW method of extracting foreign bodies from the ear has been suggested by M. Humbert, in the *Revue Medicale de la Swiss Romand.*

It consists of a rod tipped with turpentine (solid), which melts sufficiently by the natural heat of the part to become attached to any substance with which it is placed in contact, and which may then be withdrawn.

—*Jour. de Med. de Bordeaux.*

M. FERRAND after recommending glycerine in the treatment of hepatic colic, and preferring it to olive oil, on account of its cholagogue action and smaller dose, draws the following conclusions:

1. Glycerine administered by the stomach is absorbed by the lymphatics, notably by those which go from the stomach to the bilum of the liver and gall bladder, and is even found in the blood of the (sub-hepatic) veins (intra lobular).

2. It is a powerful cholagogue, and of great value in hepatic colic.

3. In a relatively large dose (25 to 30 grms.) glycerine brings about the end of the paroxysm.

4. In a small dose (5 to 15 grms.) taken every day in a little alkaline water glycerine will prevent fresh attacks.

5. Without being a lithotritic, glycerine is par excellence the treatment for "biliary lithiasis."—*L'Union Med. de Pract.*

MEANS OF DETERMINING THE SEX OF THE FŒTUS IN UTERO (Lassier).—The author considers the theory of determining the sex by a fecundation just before or after the menses ridiculous. He says: "Before exposing my theory, which allows the accoucheur to determine the sex of the fœtus, let us establish first that in woman, as in all animals, there are two ovaries, of which one produces male germs, the other female germs, turn by turn, that is each in its turn. As the Creator has left nothing to chance, it cannot be otherwise. Besides this principle is amply proved by the ovipara, whose eggs are always paired.

"In the pigeon, the female lays two eggs, which hatch out a pair. With the canary and thrush the eggs are usually four in number, and are mated. If the eggs of the same hen are hatched, the sex of the chickens is equally divided, the same occurs in the case of the goose and turkey. This granted, let us apply the same rule to women, and we shall see that we have two means for the determination of sex.

"The woman emits an ovule every month, the ovaries produce each in turn; the germs are alternately male and female.

"A remarkable fact is that the period of gestation in woman is nine months, an unequal number. The same thing occurs in all uniparous animals: the mare eleven months; the cow nine months; the sheep five months, in such manner that whilst a female drops her young she sheds at the same time a germ of opposite sex.

"It is easy to understand why a woman who lies on her left side has nine chances to two of having a boy, because in this position the ovary which produces the male ovules has more chances of its ovule being fecundated than the other, and *vice versa.*

"I have established that the procedure of ovulation alternates in the production of the sexes. This also permits us to determine the sex by calculation. If the woman is a primipara, the accoucheur has the *decubitus* for a guide. If it is her second or third pregnancy, he has only to find out the sex of the last child. If it was a male at term, the ovule corresponding to the lying-in was female, and so on. A woman becomes pregnant at the ninth month after delivery; if the last was a boy, this will be a boy also. If at the tenth, it will be a girl."

—*Gazette Medicale.*

A CASE OF OSTEOMA OF THE FRONTAL SINUS.—These osteomas are rare; about thirty-three cases are on record. Operations for the radical removal of these growths are seldom done. Pappert reports a detailed observation of a case of this nature, cured by a radical extirpation of the bony tumor. It is remarkable on account of its large size and the difficulty of removal, which necessitated a large opening in the skull.

The tumor appeared nine years previously, and had increased considerably during the last eighteen months. It formed a hemispherical projection above the right eye, which it displaced forward, outward and downward. During the operation it was found that the tumor sent prolongations into the left frontal sinus, into the nasal cavity and into the orbit. The posterior wall of the frontal sinus projected into the cavity of the skull, and

was cribriform. In raising the tumor by means of the hammer and chisel, a plate of the posterior wall of the sinus was detached with the growth. The operation was not followed by fever, and at the end of a month the patient left the hospital.

The exophthalmos has disappeared, and over the frontal sinus there is a small depression. At the upper part of this the pulsations of the brain may be felt.

Munich Med.—Jour. de Med. de Bord.

PHTHISIS OF "CHINA" POTTERS. (*Paté*) M. Paté has studied the pernicious effects of the dust of "china" factories, which contains kaolin, sand and flint, colored with a small proportion of oxide of cobalt.

It is stated that many of the potters succumb to a chronic pulmonary affection, "Potter's phthisis." This is a sclerosis of the lungs, produced by the inhalation of the irritating dust. There are three periods in the evolution of the disease:

1. An emphysematous stage;
2. A stage which includes three varieties: (*a*) an emphysematous form (which is not an exaggeration of the first stage); (*b*) a pneumonic form, and (*c*) a suffocative form.
3. A final stage, that of asphyxia.

Tuberculosis in potters is not very frequent. It is remarkable for the slowness of its evolution. In certain cases, if the workman, after becoming tubercular, is not too weak to continue in the factory, he may become cured. A sclerotic tissue may surround the tubercles and suppress them. This mode of cure has been several times observed in the factory at Montereau.—*Rev. Gen. de Med., etc.*

DEATH FOLLOWING AN INTRO-UTERINE INJECTION OF PERCHLORIDE OF IRON.—(*Pletzer*) A woman, thirty-two years, syphilitic for ten years, was affected with chronic endometritis with retroversion. Curetting, intro-uterine cauterizations with tr. iodine had been used. Following one of these cauterizations, was a flow of blood from the neck of the uterus. The hemorrhage recurring the next day, an injection of perchloride of iron was given, drop by drop, with the greatest precaution. It was followed by an intro-uterine lavage, with a carbolic solution. About a quarter of an hour later the woman experienced much pain; the pulse was thready, and complexion livid. Although stimulants were used, she died two hours later. At the post-mortem there were found blood-clots in the uterus, thrombus of the iliac veins, and a laceration of the mucous membrane of the uterus one and one half cm. in length.—*Rev. Gen. de Med., etc.*

IN a case of hay fever, the minute seeds of the different germs were found in the nasal secretions and in the expectorated mucus.—Szohner.

THE USE OF MASSAGE OF THE LUMBO-SACRAL REGION IN THE TREATMENT OF DYSMENORRHŒA OF YOUNG WOMEN.—The frequent want of success of the classical therapeutic measures is well understood, when it is known that dysmenorrhœa in young women is almost always due to a double cause: first, to the narrowness of the external orifice of the neck; and, second, to the chronic congestion of the uterus, which, by puffing out the mucous membrane of the cervical canal, applies the opposite faces of the membrane, and narrows still further the passage for the flow of the menstrual secretion.

Massage of the lumbo-sacral region is the most rapid and efficacious method of overcoming the uterine congestion, the effect resulting from massage being much more lasting than that derived from hydrotherapy and by stimulating baths. Many cases of dysmenorrhœa have been submitted to this treatment. The massage has been practised according to the following method: Frictions, pressure, tapping or beating, kneading, etc., done once daily between the menstrual period.

If practised regularly during a fortnight before the period, almost always the menses come on. It is because there was no other cause for dysmenorrhœa than the narrowness of the external orifice. The canal has become permeable by the suppression of the congestion, and this obstacle has but a very limited extent compared with what it had at the commencement of the treatment. After this the case may be considered as cured.

—From *L'Union Med. de Canada.*

THE qualities necessary for a good antiseptic, especially if it is to be used in the natural cavities of the body, are as follows:

1. A considerable antiseptic power;
2. Very feeble toxic qualities;
3. Free solubility in water;
4. Complete absence of caustic effect;

5. Non-action on instruments, linen, etc.

Microcidine as an antiseptic in urinary troubles is recommended as covering all the above conditions satisfactorily.

—Mabboux, *Gaz. de Gynécol.*

Fl. Ext. Hydrastis Canadensis, in 20 drop doses four times a day, has proved very successful, in the vomiting of pregnancy. It lowers the blood pressure, quiets the nervous centers, and diminishes the blood supply to the uterus.—Federow.

Formula—Treatment of Cystitis by Oxalic Acid (Renaud).—This treatment is said to be very satisfactory :

R.—Acid oxalic..... 1 gm.
Syrup orange peel..... 30 gms.
Distilled water.....120 gms.

To be taken during two days, in tablespoonful doses.

Prostitution (Blaschko).—In his report on this subject, Blaschko says : "The obligatory keeping in licensed houses of prostitutes is to be rejected from a hygienic point of view, and as a failure as regards the prophylaxis of syphilis. The surveillance should be transferred from the ordinary police to the sanitary police. It can only be exercised over professional prostitutes. Examinations should be practised at least twice a week and at hospitals. To the sanitary examinations should be attached "out patient" treatment for cases which do not need to enter the wards, and especially for cases which require care and watching after discharge from a hospital. Sanitary surveillance is not by itself sufficiently thorough to combat venereal maladies. It should be completed by suppression of all legal and other edicts against venereals, placing of them on the same footing as regards admission to hospitals, care and treatment, as other cases increase in the number of beds assigned to venereal cases; establishment of public consultations as an annex of the hospitals; free treatment; the dissemination of knowledge among the inhabitants of populous centers, relating to the dangers and the mode of propagation of venereal diseases."

—*Rev. Gen. de Med., etc.*

A Suicide by Means of Leeches.—An abandoned woman in Paris has just committed suicide in an original manner. "She bought fifty leeches, undressed completely, and applied them over the body from the knees to the breasts. The leeches began at once to suck—never had they had such a feast! Then when they were gorged they fell off, but the blood continued flowing, inundating the bed. The hours passed thus. However, after a time the odor of corrupted blood attracted the attention of the landlord of the house, and much astonished he set about discovering the cause. He knocked at the door of the room, and receiving no reply, opened it and went in. The woman, of a waxy whiteness, was found extended on the floor, her eyes closed, but still breathing. She was taken to the hospital in a dying condition."

—*Jour. de Med. de Bordeaux.—Jour. de Med. de Paris.*

Tænin, a Common Cause of Intercostal Neuralgia, and of Shingles.—Dury reports a case of intercostal neuralgia, which resisted all ordinary treatment, and as it was discovered that the patient had tapeworm, treatment was instituted for that; after the expulsion of the worm the neuralgia disappeared. He also reports a case of shingles, caused also by tapeworm.—*Gaz. Med.*

Menthol, in treatment of hemorrhoids, is much praised; it relieves the pain and the spasmodic contraction of the sphincter ani, permitting the easy reduction of the humors.

Cobwebs and Tetanus.—Tourassi and Frateni think that cobwebs are a frequent cause of tetanus, and give the following as the result of their investigations :

1. That the germs of tetanus exist in large numbers in certain soils, and are met with in cobwebs, along with the dust.

2. That even if these cobwebs do not contain tetanus germs, they do contain other pathological germs.

3. The employment in medicine of cobwebs as hæmostatic agents should be prohibited, in view of the risks incurred.

—*La Gazette Medicale.*

Insomnia and its Treatment (G. Lyon).—Insomnia is always a phenomenon of a nervous character; in fact, a pathological state, determined by a definite alteration, or by a functional disorder of the nerve cell, inaccessible to our present means of investigation.

From a practical point of view we may distinguish nervous insomnia, properly

so-called, from insomnia of dyscrasic origin, where the want of sleep is provoked by toxic substances, or microbic poisons carried to the brain by the blood current. In the first class may be placed insomnia, having its origin in the periphery of the nervous system, or in the centers themselves. Sleeplessness due to pain, or to exaggerated sensibility is of peripheral origin. In other cases the brain is directly involved, as in insomnia due to the emotions, to neurasthenia, hysteria, insanity, or even to organic disease of the brain, as general paralysis, softening tumor, etc. The second class comprehends cases produced by the abuse of tea, coffee, alcohol, etc., and perhaps also those caused by infectious diseases. Cases due to digestive disorders may also come under this head when not the direct consequence of pain. This is not an improbable supposition, when it is remembered that tetanus, the higher manifestation of hyper-excitation of the nerve cell, is sometimes connected with dilatation of the stomach, and has been removed by lavage of the organ. The foregoing considerations prove that the treatment must be as variable as the cause of this trouble. The means of relief include hygienic measures, restriction of the use of various stimulants (including sometimes tobacco), change of scene, and drugs, among which are opium, chloral antipyrine, etc. "Febrile" insomnia is often very rebellious to treatment, here the bromides are useful. It must not be forgotten that insomnia may be due to alcoholism, and thus calls for the daily ration to which the subject has been accustomed, combined with soporifics, baths, etc. The insomnia of convalescence generally vanishes under the use of reconstructive measures and the use of codeine and allied drugs.

—*Annals de Med.*, June 15.

Dresses "En Traine," *versus* Hygiene —There has just been formed in Berlin, a society composed largely of ladies, having for its object the suppression of trailing dresses, the fringes of which stir up the dust which may contain infectious germs.—*Lemain Med.*

Phenol Sulphovicinate is acquiring a somewhat extended use in Paris as a remedy for diphtheria Cases of the disease have been cured in four days.

—*Le Progrés Medicale.*

Sulpho-vicinic acid, extolled by Renault, may be used in volume of 20 to 100 of carbolic acid, forming the sulphovicinate of phenol (above-mentioned). Its action on the mucous membrane gives a very transient sensation of slight heat and burning. Compared with some of the other drugs used in diphtheria, such as salicylic acid, chlorate potash, alum, boric acid, lime-water, etc., it shows great advantages.

Antipyrine Associated with Bichloride of Mercury as an Antiseptic Treatment of Gonorrhœa (*Watier*).—Having used, on a certain case, an injection of bichloride, $\frac{1}{10000}$, and micturition being exceedingly painful, the author conceived the idea of following it up with an injection of antipyrine, $\frac{1}{100}$. The pain was at once relieved and the discharge quickly stopped. He tried antipyrine by itself, but had no good results.

He uses—

℞.—Antipyrine	grms. x
Bichlor. mercury	cgms. x
Water	litre i.

The syringe must be in good order, and it is preferable to obtain one with a leather piston.

The most important point is to retain the injection a half hour, in order that it may act thoroughly on the mucous membrane. The number of injections per day may be from 3 to 4, used after micturition. He uses, in addition, the ordinary low diet, local baths, and antaphrodisiacs, if necessary.

—*Jour. de Med. et Cher. Fratigues.*

Foreign Body in the Right Bronchus (*De Angelis*).—A young girl, thirteen years of age, was amusing herself by throwing up in the air a small toy trumpet, and then catching it in her mouth (the measurements were 3 c.m. long and 66 m.m. diameter). During an inspiratory effort the instrument passed through the larynx and lodged in the trachea. A fit of suffocation came on. The bystanders gave her some blows on the back which had the effect of sending the body lower down, and relieving the distress of breathing ; but the trumpet at each inspiration and expiration gave out a sound which could be heard fifteen yards away. For three days this was the only annoyance caused, but after that she presented signs of broncho-pneumonia.

Tracheotomy was proposed and refused. She died twenty-three days later. The trumpet was found in the right bronchus, in a large ulceration. The larynx and trachea were normal.

—*Rev. de Laryngologie.*

A MIXTURE TO REPLACE THE OPIATES.—Dr. Portier (*La Semaine Médicale*, No. 19, 1892) recommends the following as a substitute for the preparations of opium:

℞ —Hydrochlorate of cocaine..... cgms. 50 (gr. viij.)
Phenacetin..... gms. 1.5 (gr. xxij.)
Exalgine..... cgms. 50 (gr. vij.)
Salicylic acid..... gm. 1 (gr. xv.)

Divide into ten powders. Take one powder every two or three hours until the pain ceases.

—Pritchard, *Lancet-Clinic.*

THE VERTIGO OF ARTERIO SCLEROSIS.[1]—The discussion of a pathologically subjective state is in itself practically impossible, and the difficulty is not lessened when that state is a symptom of many widely differing conditions, some functional and some grossly organic. To use the term vertigo is therefore undesirable, but for lack of one more definite its employment is a necessity, and in this connection is not open, perhaps, to the emphatic objection that elsewhere obtains. It is in its generic sense that I wish to make use of it.

In a very recent and comprehensive article, Suckling[2] takes up the subject of vertigo, and in a way describes it as the consciousness of disordered equilibration, showing that it may exist from want of harmony in the impressions received from any of the senses, and possibly from the sensibility of the viscera as well, but it is not the present purpose to direct attention to the physiology of equilibration nor to take up the interesting topic of co-ordination, which is closely associated therewith. He clinically classifies the forms of vertigo as aural, ocular, vascular, dyspeptic, nervous, epileptic, toxic, of organic brain disease, and from reflex irritation, but says specifically nothing of the vertigo of arterio-sclerosis. Most other writers either on the topic of vertigo or that of arterio-sclerosis are equally silent; yet vertigo may be and often is, as will be urged farther on, a signal symptom of this arterial state, the proper recognition of which may lead to such treatment as will obviate organic diseases of the brain, kidneys, liver, and other important structures, and many times definitely prolong life.

It is only of late years that arterial changes have been given the importance in pathology and in clinical medicine that they deserve. The degeneration of senility, the modifications found in gout, rheumatism, chronic metallic poisoning, syphilis, and which are associated with alcoholism, Bright's disease, and many other serious maladies, makes it imperative that we recognize at the earliest moment the presence of a change in the artery which may in many instances be amenable, in the early stage, to treatment, but which soon otherwise passes beyond the possibility of medical control. Atheroma is not here synonymous by any means. It is the pre-atheromatous condition with which we have to deal, and it is the vertigo symptomatic of that arterial fibrosis to which your attention is directed. As a matter of demonstrable fact, this arterial state is widely and generally disseminated in these cases, but the complexion of the disease varies with its local intensity. In some instances a contracted kidney, in others angina pectoris, in others the cerebral symptoms are the prominent features, and of the brain symptoms the earliest is vertigo, and the last cerebral hemorrhage or dementia.

When a man, past the prime of life, without any previous serious illness, becomes suddenly faint, has a swimming in the head, a feeling of giddiness, of distinct gyration, of darkness and impending death, one or several of these sensations, he usually at once seeks advice in grave apprehension, sometimes well founded, of approaching cerebral apoplexy, and usually gets a cholagogue cathartic, or is told that his stomach is wrong, and sometimes is told rightly. But cases are constantly presenting themselves in which such vertiginous attacks are happening at shortening intervals; the patient gives up his tobacco, his spirits, if he is a drinker, cuts down his meat, takes to some of the many waters recommended, has Turkish baths, and gains only moderate relief or

[1] Read before the American Medical Association, June 8, 1892.

[2] Birmingham Med., Rev., Nov., 1891.

none at all. If he is carefully examined he will probably present a well-defined tortuous frontal artery, a distinct arcus senilis, a strong, even a clanging, second sound of the heart, sometimes reduplicated, and give a sphygmogram indicative of increased arterial tension. The pulse may be abnormally slow or arhythmic, the urine scant and a trace of albumen is not rare. He finds that exertion of a moderate amount precipitates the attack, that he cannot endure a temperature at all above the usual, and often a change of position from recumbency to the upright is the occasion of a "blur" or of giddiness.

The attack itself is, as already indicated, widely variable in different patients, but usually consists with itself for the given individual. A fullness and throbbing in the head, a feeling of heat in the scalp, and a blur before the eyes are usually mentioned, and at such times marked paleness is noticed, followed, as a rule, by considerable redness of the face. There is a tendency to get into the open air, and badly-ventilated or close apartments are unendurable. An habitual smoker will sometimes find tobacco smoke repugnant. In more severe forms the patient may stagger, fall, or gradually sink to the ground; he cannot speak for a few seconds, though consciousness is rarely completely lost. The recumbent position is usually sought, or the patient clings to some object, and after a period of from five to twenty minutes, the feeling passes away, leaving him rather languid, with an inclination to sleep, and usually mentally depressed and apprehensive. At first he attributes the attack to anything and everything that in his estimation can cause a departure from health, and usually establishes a close watch upon his diet, habits and mode of life, is inclined to avoid exercise or exertion of any sort, fearing to precipitate an attack, or to go by himself on the streets, and, in short, becomes an invalid with hypochondriacal tendencies.

In a remarkable monograph on this subject, Professor J. Grasset,[1] of Montpellier, divides the vertigos of arteriosclerosis into three forms: (1) Simple vertigo, (2) Vertigo with epileptiform crisis, and (3) Vertigo with slow pulse and sycopic, or epileptiform attacks. Some of the features of the slighter attacks, as already roughly sketched, undoubtedly suggest a similarity to mild epileptic seizures, for instance, the paleness of the face, the oppression and the final confusion, depression and tendency to sleep, but personally I have never encountered well-marked convulsive phenomena reasonably attributable to this cause.

With Huchard,[1] this writer is inclined in some cases to attribute acquired habitual extreme slowness of the pulse, which in numerous reported instances has ranged from twenty to forty per minute, or even less, to the effect upon the medulla of an arterio-sclerosis acting mechanically to lessen the blood supply to the cardiac centers. As yet this hypothesis has received, as far as I have been able to ascertain, no positive anatomical or experimental support, though it is seductively reasonable. This bradycardia is almost always marked by syncopal and vertiginous features, and arises in individuals predisposed to or actually the subjects of marked arterio-fibrosis.

The diagnosis is often one of extreme difficulty, in spite of a hasty contrary statement by a recent American writer, and I have known this symptomatic vertigo confused with Meniere's disease by a very competent specialist in nervous diseases, for it may, as in that particular instance, be of a systematized character, that is to say, marked by a sensation of falling in a given direction, or of being rotated in a constant manner to the right or left, and even associated with a suggestive stagger. If to this a little middle ear catarrh is added, a diagnosis of aural vertigo might be easily reached, but a closer and somewhat wider examination will detect the integrity of the auditory nerve and the presence of the arterial fibrosis with the underlying predisposition of alcoholic excess, syphilis, gout, rheumatism, chronic lead infection, or other constitutional state of etiological significance.

In the treatment the basic element is the object of attack, and whatever this may be, the iodide of potash will find an indication in the arterial change, which, if recognized in its incipiency, can be practically controlled, providing the patient is manageable. It is the sheet anchor, and given in moderate doses of from 30 to 90

[1] Du Vertige Cardio-Vasculaire, Paris, 1890.

[1] Traité des Maladies du cœur et des Vaissaux.

grains a day for a number of months, much benefit and often a substantial cure can be expected.

I am lead to emphasize the importance of this vertigo, because it is a very early symptom of a condition which neglected leads to distressing and even fatal results, and which unrecognized is the source of endless anxiety and misery to the patient and of chagrin and disappointment to his medical attendant. If it were desirable numerous case records could be cited, but it is hoped that attention once having been called to a proper interpretation of the symptom it may be less frequently mistaken, and I would urge that the condition of the arteries and the heart be made an object of early and thorough investigation in every instance where obscure vertiginous attacks, or a persistent giddiness is present.

—Archibald Church, in *Brit. Med. and Surg. Jour.*

THE COATED TONGUE.—A physician, on being asked if he could speak many languages, replied: "I can speak but one language, but I can understand many tongues." I come with this question today: Do we, as physicians, understand the many tongues we see; do we comprehend their pathological significance?

The tongue has been called a mirror, reflecting the various conditions of the digestive organs, the composition of the blood, the state of the secretions, and the condition of the nervous power. It is dry when the salivary secretions are deficient, as in febrile diseases, in the exanthemata, and in typhoid fever. In the latter disease it has a brownish coat, and is often fissured.

The dry, encrusted, brown, and fissured tongue is often the seat of parasites that cause decomposition. It is a bad symptom, and is often the forerunner of death. The color of the tongue is subject to many changes. It is of a pink hue when the physiological actions of the stomach are carried on normally. It is usually very pale when anæmia exists. It is red and shining in the exanthemata. It is bluish or livid when there is obstruction to the venous blood, from diseases of the heart or lungs. A red, smooth tongue is a sign of failing nutrition, and is often seen in cases of phthisis.

Normally, there is no coating on the tongue, but the slightest variation of physiological functions, especially of the stomach or liver, produces one, varying in thickness from a slight furrowed condition to one of parchment consistency. It is whitish in catarrhal affections of the stomach, it is yellowish when the liver is disturbed, and it is brownish when the blood is vitiated from disease.

Certain medicines and occupations cause the tongue to become coated, and inflammatory affections of the throat often affect the tongue. Some of the coated tongues seem to have a covering that is literally organized, aud a part and parcel of itself. Too frequently the physician writes his prescription by looking at the tongue alone, believing that the coating is due to some catarrhal affection of the stomach, and we make the mistake in not thoroughly examining our patients, trying to discover the cause producing the malady. We see the effect only of the disorganized function on the tongue. How often we have heard our patient say: "If I could but get my tongue clean, I am sure I would be well." After we have tried an acid or alkali, and essence of pepsin or bitter tonic, without effect upon the tongue for the better, we begin to look for some other symptoms, which will throw more light upon the case. And about this time our patient has made up his mind to try another physician, and we do not have the opportunity of making the critical examination that we should have made when we were first consulted.

These coated tongues need their cause removed before they can be cured. We have all seen cases that have baffled our best efforts, and often we have been at a loss to know the cause of the persistent coating on the tongue. We have examined them, perhaps, by palpation and percussion. We have continued our medication for months, and yet the tongue is as coated as it was when we were first consulted. What is the reason for it?

Let me detail three cases that have come under my care in the past few months, and perhaps a cause may be found.

Case I.—Mrs. C., aged thirty-nine years; five feet eight inches in height; weight one hundred and forty pounds; mother of one child aged five years, at whose birth she suffered from lacerations of cervix and perineum. Her only complaint when she consulted me was for a persistent coating of the tongue, that had

existed for four years, from the time of the nursing of her baby, when she took three or four quarts of rich milk every day. The tongue was covered to the tip with a grayish-green coating, thicker behind, on the dorsum, than in front. There was no bad taste in the mouth, and on close examination only a slight sour odor was detected on the breath. Her appetite was fair. For two or three years she had been in the hands of the physicians, and each thought her case was catarrh of the stomach. A gynæcologist believed it to be dependent upon her lacerations, and was successful in repairing them; the operation did not cause her tongue to be any cleaner, though it improved her general health. Her complexion was pale and sallow; she was anæmic, and her pulse was weak. There was some tenderness over the liver, which was enlarged; the spleen was enlarged and tender. The urine passed freely; was low in specific gravity, 1.010, but contained no albumin or sugar, though I was led to suspect a chronic form of Bright's disease.

This case puzzled me very much indeed. I tried everything that I knew of, that was ever used in stomach affections, and all to no purpose. Then I asked for consultation, and named Dr. E. A. Chapoton as consultant. His examination was a very careful one, and finding the pulse weak, he employed auscultation; possibly a strange thing to do when the disease seemed to be entirely in the stomach. He was rewarded in finding a mitral regurgitant murmur, which seemed to be in its incipiency, as it occurred just after the first sound of the heart, and was a short, soft, blowing sound. Then only were we able to unravel the peculiar case, and find a cause for the coated tongue, which undoubtedly was obstruction of the portal system, which induced chronic venous congestion of the liver, stomach and intestines. There had been no history of rheumatism, endocarditis, or severe straining from any cause, and it is a mystery to me why this murmur should have occurred at all, for she was so situated that she did not have to work. Possibly it may have come on during her confinement.

Case II.—Mrs. F., aged sixty-six years; mother of six children; has had a chronic bronchitis for years, and for years has had a coated tongue. The coating was most marked in the morning, and it was necessary to brush it hard, when she brushed her teeth, in order to remove it. The appetite was only fair. There was no special gastric symptoms. Physical examination by percussion and palpation showed the left lobe of liver hard and resisting, an enlarged stomach due to dilatation, and a tender spleen. The tongue was heavily coated, especially far back upon the upper and middle portions. It was grayish-green, and of almost leathery consistency; it was slimy and of offensive odor.

In making an examination of the lungs by auscultation, a mitral regurgitant murmur was discovered at the apex of the heart. Upon a more critical examination it was found that the heart was hypertrophied, and that all of the abdominal viscera were the seat of mechanical congestion. The liver was hard and atrophied, the spleen was tender, and the mucous membranes of mouth and tongue were cyanotic to a considerable degree. The disease of the heart was evidently secondary to the disease of the lungs, and the obstruction to the flow of blood through the heart was the cause of the catarrhal condition of the stomach that produced the coating of the tongue by producing the engorgement of the portal circulation.

Case III.—Mrs. B, aged forty-four years, mother of three children, has long been troubled with a coated tongue and offensive breath. Her tongue is never wholly clean; at times the tip and edges are clean but the upper and back portions are furred and heavily covered with a grayish-yellow coat, which looks like a pseudo-membrane. She has been a great sufferer from hemorrhoidal difficulties, uterine congestions, severe headaches, and congestions of lungs, etc. Some fifteen years ago she had pneumonia, and it was intimated that she would soon die of consumption, but she outlived the physicians that gave this unfavorable prognosis. Twelve years ago she suffered from an attack of acute articular rheumatism which was complicated with endocarditis. The disease seemed to expend itself on the mitral orifice, and at present there is a mitral obstructive and a mitral regurgitant murmur, with marked hypertrophy of the heart.

The compensative hypertrophy of the right ventricle ceased long ago, and now secondary dilatation exists, which, as we know, admits of no compensation. The

pulse at times is full and tense, but varies greatly, at times stumbling along, at other times intermitting. Often there are rushes of blood to the head, the carotids are seen to pulsate violently, showing that the heart's action is too active, and that the diseased condition is being strained. Then follows a change, and there is cyanosis of the mucous membrane of the mouth, and the finger-nails are blue. The lungs become the seat of (chronic) congestion, and the pulse grows weak and stumbly. The obstruction to the portal circulation by the embarrassed heart's action has disorganized physiological function and produced chronic venous engorgement of all the abdominal viscera. There is intermittent anasarca of the lower extremities. Anginal attacks have never occurred.

She has undergone operations for hemorrhoids, uterine affections, etc., etc., and yet many, I will not say all, did not discover the organic heart disease that is at the seat of all these ailments and is especially the cause of her coated tongue.

All these cases have been benefited by the use of digitalis, strophanthus, and nux vomica, relieving the more urgent symptoms, while the free use of tonics containing iron and the hypophosphites have improved their general health.

From these cases we learn that organic disease of the heart makes physiological functions pathological conditions, by the interference with the blood in its circulation through the system, especially the portal system; and that many of the affections that are considered simple and of little import, such as chronically coated tongues, and that give no subjective symptoms, are often found to be symptoms of grave organic disease that can be made out on the first examination by the careful physician, if he will make a thorough examination of the case.

Duffield, in *The American Lancet.*

Sir James Crichton Browne on Sex in Education.—The address which Sir James Crichton-Browne delivered to the members of the Medical Society of London, on the occasion of celebrating the hundred and eighteenth anniversary of the Society on the 2d inst., was one of great interest and extreme importance, for it dealt with a question which must have commanding influence on the destinies of the human race, viz., the extent to which difference in sex should call for difference in education.

Sir James is of opinion that the best way of estimating the difference between the intellects of men and women is to consider and to determine the difference between their bodies. These differences are, he maintains, real and deeply founded in structure, and he selected three points for special elucidation—the actual weight of the brain in the two sexes, the specific gravity of the two chief structures, the gray matter and the white of which it is composed, and the manner in which blood is distributed to its different parts. He showed that the female brain is lighter than that of the male, not only absolutely, but relatively to the respective statures and weights of the two sexes; that the specific gravity of parts of the female brain is less than that of corresponding parts of the male brain; and that the blood supply, which in the male is directed more towards the portions which are concerned in volition, cognition, and ideomotor processes, is in the female more directed towards portions which are mainly concerned in the discharge of sensory functions. These facts lead to the conclusion that the brain of man is an organ broadly distinguished from that of woman, and that each is fitted for its own particular work. By forcing the education of girls in directions formerly reserved more exclusively for males, he admits they have had opened up to them interests and attainments formerly denied them, but he asserts that the benefits and apparent advantages have been attained by serious drawbacks, and that the new spheres of work open to women are apt to involve grave dangers to health, both immediate and prospective, which have not yet been sufficiently appreciated.

In support of his assertion, Sir James brings forward facts which lead to the conclusion that the brains of many school girls are worked in a manner which is good neither for the healthy development of the mental or physical powers. At one girl's school where he had been permitted to make inquiries, he found that out of 187 girls belonging to the upper and middle classes, well-fed and clad and cared for, and ranging from 10 to 17 years of age, as many as 137 complained of headaches, which in 65 instances occurred occasionally, in 48 frequently, and in 24 habitually. He cited the authority of Sir

Richard Owen for the position that children have no business with headaches, and that something must be wrong in the school in which they frequently suffer from them. If, as he believes, girls are frequently engaged until past ten o'clock at night in preparing their school tasks, it is easy to understand that a state of brain strain is induced, which is fatal to normal sleep, and is destructive of breakfast appetite. When a girl is unable to eat a hearty breakfast, Sir James considers that she ought not to be allowed to undertake her school work for that day, and we think most medical men will agree with him. Loss of appetite for one's breakfast is often the first indication of health giving away, and to force girls to hard brain work when the digestive organs have struck, must end in disaster.

Referring to the recent action of the St. Andrew's University in throwing open the classes in arts, science and theology to women, Sir James said he regarded it as a retrograde and mischievous step, for "what was decided amongst the prehistoric protozoa cannot be annulled by Act of Parliament; and the essential difference between male and female cannot be obliterated at a sweep of the pen by any Senatus Academicus." The tall, graceful and lovely English girls whom we meet now and again are, he remarked, the off spring of mothers who were denied the advantages of a "High School" education. It is depressing to think what the next generation of English girls will be like. "I once," he said, "saw a vision that has haunted me ever since. It was a score of sweet girl graduates from a celebrated college standing together in a group on the platform of a provincial railway station, waiting for trains to carry them home at the end of the term. Sweet, they were, I doubt not; most of them carried musical instruments, but they were not, upon the whole—well, not just —'fairest of the fair' to look upon. I am afraid I shall be called ribald and profane, but I should describe them as pantaloon-like girls, for many of them had a stooping gait and withered appearance, shrunk shanks and spectacles on nose. Let us conserve the beauty of our English girls very jealously. I would rather they remained ignorant of logarithms than that they lost a jot of it."

This is a melancholy outlook we admit, but we would fain hope that withered shrunken-shanked girls will always be a poor miserable minority, and be rarely met with except among town dwellers. Those who are responsible for the education of girls will, no doubt, in most cases also provide for the needs of physical development, but even if in the higher circles of society that is neglected, we may be sure that a sufficient number of healthy well-developed women will be found in the lower walks of life, especially in rural districts, to ensure the propagation of the species under as favorable conditions as have ever obtained in the history of the human race. —*Canada Lancet.*

Medicine in Fiction.—We laughed when Mark Twain proposed to deliver a course of lectures upon Chemistry before the Royal Society, adding that he was "in a position to do this with greater freedom, because he knew nothing whatever about the science," but the public do not laugh at, but take in all seriousness, the medical incidents and opinions scattered up and down the pages of the novels and poems which so commonly deal with medical matters. What with the medical books which everybody nowadays feels it his duty to peruse, and the quack advertisements which force themselves upon his attention wherever he turns, it is impossible to avoid collecting a curious amount of medical information of a sort which is certain to find its way sooner or later from the end of the pen of the ready writer. This is perhaps not to be wondered at, considering how large a place ailments and modes of treatment occupy in our thoughts and interests. The freedom with which the novelist discusses these questions is, of course, due to the principle which led to Mark Twain's droll suggestion, though it is not acknowledged with such charming *naïveté*. As every man is expected to be a fool or a physician at forty, a novelist can hardly be blamed for assuming the latter character, and he usually does assume it with startling confidence.

One of the strange medical things in "Monte Cristo" is the way in which the old revolutionist, Noirtier, manages to live on, paralysed in every part of his body except his eyelids, which he winks freely. Yet the old fellow reasons acutely, and finds no difficulty whatever in swallowing food or drink. Dumas seemed absolutely unaware that such a paralytic condition as

he describes in Noirtier's case involved of necessity brain damage of the most serious kind. Elsewhere Dumas made a guillotined head speak and weep. In one of his tales in the volume, "Les mille et un Fantimes," there is a story of a man engaged in making experiments on heads fresh from the guillotine in the Reign of Terror. The doctor is shut up with a sack of fresh heads in a little mortuary chapel, when a voice from one of the heads call him by his name—Albert. "It was the head of Solange, I thought I was going mad. I cried three times, Solange, Solange, Solange! At the third time the eyes opened, looked at me, let two tears fall, and darting forth a dim light as if the soul were escaping, they closed never to open more." Then there was Krook, the "Lord Chancellor," in "Bleak House," who went off the earthly stage by spontaneous combustion. Dickens might well be excused for falling into an error which was at that time commonly believed in by people who ought to know better. Bulwer Lytton went in for medical marvels in "Zamoni," but as he was a student of mystic lore, and actually learned magic from a professed thaumaturgist, the Abbe Constant, his wonders were attributable not so much to his ignorance of medical science as to his belief in the elixir of life and the transmutation of metals.

In "Called Back" we have the blindness and subsequent cure of the hero, and the mental aberration and subsequent recovery of the heroine. There really was some medical knowledge displayed in both these "cases." The peculiar blanching of the heroine's skin after her shock was not at all badly conceived; her partial loss of contact with the outer world was not an ill-contrived symptom, though the facility with which she moved about, and posed like a sane person before her lover, quite lifted her case out of the region of the actual medical world as known to physicians.

It is not surprising that even George Eliot, with all her knowledge of the innermost workings of the human mind, should have lost her way when dealing with the morbid changes of mind and brain. Tito's father, Baldassare, had been a great scholar, but after a long illness his memory, upon recovery, became a perfect blank; he could recall nothing of his scholarship, though he had not forgotten who he was; with all this Baldassare is not represented as having lost his reason; he remembers his past life, but he can no longer read or write or recall any of his scholarship for which he had been so distinguished. It was not amnesia or agraphia with which he was afflicted; it was a form of cerebral disease known only to the eminent novelist.

Wilkie Collins made a specialty of his medical knowledge, and it was upon this account that he was induced to undertake an antivivisection novel, which he published under the name of "Heart and Science." The work was equally unsatisfactory, both to the persons who inspired it and to the general public. The vivisector may be clearly enough conceived in the novelist's mind, and if his laboratory were the only stage on which he acted, the drama of life would be easily dealt with; but the vivisector in the ordinary relations of life—more especially as the family physician—is another character altogether, and cannot readily be made to fit the circumstances necessary to make a good, sensational novel. Wilkie Collins' effort in this direction was a complete failure, and his medical men and his wonderful drugs could never have existed outside his own imagination.

In Dickens' "Tale of Two Cities," where Sydney Carton substitutes himself for the condemned Evremonde, we have premonitions of the chloroform which was to be discovered fifty years later—the chloroform of popular imagination, however, and by no means the $CHCl_3$ of the *Pharmacopœia*.

The poets are, if possible, even worse offenders in the matter of their death scenes than the novelists. A man pulls a 2-drachm phial of some poison from his breast, swallows the contents, proceeds to make a two-hundred line speech without a pang or a gasp, staggers gracefully backward to a conveniently-placed seat, drops upon it, clasps the region of the heart with both hands, and dies after a little convulsive movement of the legs. Another is run through the chest with a sword, he falls after some appropriate "business," but he usually raises himself to a sitting posture and makes a speech full of the most beautiful sentiment, sighs deeply, and dies. Heart disease, too, carries off heroines in a fashion quite unknown to doctors, and, although it is of the variety known as "broken heart," has characteristics

which must not be generally associated with fracture of so important an organ.

The matter has its serious aspects, for novels occupy an important position in the literature of the day, and form almost the sole mental pabulum of half the mothers of England, especially amongst the well-to-do classes.

—*British Medical Journal.*

Bruises of Internal Organs.—We are familiar enough with bruises of superficial parts, but perhaps less attention than they deserve has been given to bruises of internal organs, for contusions of viscera, although noticed in our works on surgery, receive but little attention in practice, and are perhaps commonly recognized only in their severer forms. Yet it is obvious that bruises of important internal organs must, as a rule, be in their nature and clinical history far more mischievous than the bruises which are so frequently seen in and immediately under the skin. One reason of the comparative neglect of their study is no doubt to be found in the fact that so little attention is usually called to their existence after death. If observed at all, they are passed by with slight notice in the search for injury of a graver nature. Illustrations of simple contusions are very rarely to be met with in our museums—hardly ever, except in conjunction with, and as a part of, some more serious lesion. The absence of such illustrations, which is, I think, to be regretted, is due, in part at least, to the fact that the characteristic appearance is difficult to preserve. Of course, much depends on the color, which rapidly fades on exposure to light. There is in our museum a portion of the left ventricle of the heart of a child, which at present shows very plainly and beautifully two or three small bruises of the muscle. First, let us glance at the nature and clinical history of bruises, and then let us shortly review, in the way only of illustration, without any attempt at a full study, bruises of some of the more important internal organs. Bruises, of course, like almost all injuries, vary widely in degree. In its usual form, bruising means rupture of portions of tissue, including that of the minuter vessels; hence, hemorrhage and extravasation, to which the characteristic stain is due. But one can imagine bruises so slight as to involve little or no rupture; while, when the injury is so severe as to produce visible laceration of texture, the simple bruising of parts becomes merged into the effects of the graver lesion. It would be generally said that you cannot have bruising without laceration—that, in fact, the laceration is an essential part of bruising. Although this may be conceded from a pathological point of view, yet clinically it is of some importance that the distinction should be drawn. In simple bruising there is not necessarily laceration visible to the naked eye—no distinct gap or rent of the injured substance; the rupture of vessels is made apparent only by the ecchymosis. The amount of blood extravasated in bruises, of course, varies widely, and depends not only on the nature and extent of the actual injury, but on the vascularity and dellicacy of the structure which has sustained it. This hemorrage, when copious, often masks the other effects of bruising. Just as when the substance of tissue is largely torn we refer to the rent or laceration, and not to the bruise, so, when there is copious hemorrhage, either in the form of a distinct collection of blood in the injured part, which is called "hæmatoma," or when it escapes into adjacent cavities, we speak and think of this rather than of the injury on which it depends.

I propose now to consider cases of what may be called "simple bruising," in which, although there are necessarily laceration of tissue and extravasation of blood, neither the rent nor the hemorrhage constitutes a prominent feature of the injury, but in which, nevertheless, the damage done is, I venture to think, worthy of more attention than is usually given to it.

Bruises of the brain are, I believe, far more common than is usually supposed, and worthy of much more attention than they have hitherto received. In works on surgery, contusion of the brain obtains a passing notice, and occasionally, as at St. George's Hospital, a specimen to show contusion of the brain is to be found in our museums; but, in practice, it is for the most part included in the more vague and comprehensive condition of concussion. The relation of contusion to concussion of the brain presents some points of great interest. On what happens in a case of concussion pure and simple, we are not perhaps quite clear; certainly, we are not agreed, whether it be due to some sudden and temporary change in the minute vessels in the way of spasm, or whether—which I venture to think is

more probable—it is due to some more subtle and profound molecular disturbance of the brain substance itself. As a matter of fact, we know that cases of simple concussion severe enough to prove fatal, are so very seldom seen, that some even doubt whether they ever actually occur. That, however, concussion of itself, pure and simple, may prove fatal, and that more frequently, when death from injury to the brain is attributed to other causes, it is really due to concussion, I have no doubt, and the facts and arguments for this belief I have given elsewhere. So far, however, as the brain itself is concerned, the chief changes that are associated with severe concussion are contusion or bruising. In the worst instances this is accompanied by laceration of the brain substance and copious hemorrhage, so that the blood collects into a distinct mass, but many cases occur, short of these, in which there is neither visible laceration nor blood-clots, but simply a bruised condition of the cerebral substance, and this, perhaps, in a situation opposite to the part struck. When in such an instance a section of the brain is made, the white or gray matter, as the case may be, exhibits a patch or patches, pink or red from blood-stain; and when these are more minutely examined, especially after water has been allowed to flow freely over the service, numerous minute points or specks of blood appear scattered over the stained area. In these places the substance of the brain shows the effects of bruising. There is here some rupture of substance and some extravasation of blood, but no visible laceration and nothing which would be called hemorrhage. There cannot, I think, be any reasonable doubt that this condition frequently occurs as the result of injury to the head short of any graver effect, and that such cases usually terminate in recovery. Under the head of concussion of the brain, cases are described in which recovery is not rapid and direct, but more prolonged and circuitous, in which the patient passes days and even weeks in a state of partial unconsciousness or constant drowsiness, with sometimes fits of restlessness, from which, perhaps, he may be temporarily aroused, to make short replies to simple questions, but into which he immediately relapses when left to himself. Then, as consciousness is gradually restored, the mind remains in a dull and lethargic state, interference of any kind is often resented and the temper is sometimes strangely altered for the worse. Usually headache, more or less severe, is complained of. But the bodily functions in general in this stage are performed fairly well, and there is no fever or sign of serious disturbance in any other organ than the brain. In such cases, many months often elapse before complete recovery is assured, and during this period its progress is easily interrupted by any attempts to exert the mind. Patients in this state complain that they cannot attend to business; that they are incapable of sustained mental effort; that they have lost the power of self-control; that their senses of sight, hearing, and taste are strangely disordered, and so on. Many such cases, in more recent times, have acquired interest of another kind from the fact that they have been the result of accidents on railways.

Now I am not asserting that such a state as this, even in its more severe forms, may not be the result of what I have called simple concussion, that if the brain could be dissected, any abnormal condition would be always visible; but, seeing how different the effect of injury and the progress of the case are from that of many cases of what may be called simple concussion, even in its severe forms—seeing this, and coupling it with the fact that bruises of the brain are not uncommonly seen when looked for after death from other causes, I think, to say the least, it is reasonable to assume that in such cases as I have alluded to, we have to deal with the effects of contusion beyond those of concussion, pure and simple. To be sure, the treatment of such cases does not turn upon the precise view which is taken of their nature, whether they are regarded, as perhaps they generally are, as cases of mere concussion with unusually slow and irregular recovery; or whether, as it seems to me, they should be regarded as cases of concussion complicated with contusion, from which the patient continues to suffer after the effects of concussion have subsided; on either view the management is practically the same. It is on either view the insistance upon absolute and prolonged rest, with careful nursing—upon absolute rest, not of the mind only, but of the senses of sight and hearing and prolonged not only during the whole period of cerebral disturbance or defect but for at least some time after. The danger of fur-

ther mischief in these cases is, perhaps, not so great in the earlier stages, when the necessity of abstinence from all mental effort is obvious enough, as in the later ones when the patient, feeling himself, while quiet and at rest, to be tolerably well, cannot be persuaded to abstain from such activity as may be productive of mischief. Over and over again one sees patients who, in spite of all precaution, attempt to enter into active life, break down and are compelled to desist by headache, loss of sleep and of appetite, disorder of the senses and strange and startling sensations in various parts of the body. It is well if such strong hints are taken in time, for even the loss of this is in the end made much greater by such premature attempts.

What has been said of bruises of the brain may be applied also in general terms to contusion of the spinal cord. In examinations after death similar appearances to those found in the brain are sometimes seen in the cord—blood-stained patches in the substance of which minute extravasations may be discerned. As with the brains, the effect of such injuries during life is for the most part included in the symptoms of concussions, and little or nothing is said or thought about the bruises which the substance of the cord may have sustained. In modern times such cases are most commonly met with as the result of railway accidents, and have been no doubt described and discussed as cases of concussion. With reference to these important cases in their relation to similar injury of the brain there are two points especially which deserve attention. The symptoms of these injuries, at least the more immediate ones, are less marked in the cord than in the brain. At first there is certainly less pain and usually less local disturbance. There is sometimes tenderness over the particular region of the cord, but this is probably due to injury of the surrounding structures rather than to that of the cord itself, and there is nothing corresponding to the headache, which is often so severe in corresponding injury of the brain. As a consequence such injury is more likely to be overlooked or disregarded in the cord than in the brain, and the needful rest neglected with much greater risk of subsequent mischief. Again, even when the necessity of absolute rest after such an injury is insisted on, it cannot be carried out so fully and completely as in the corresponding cases of many portions of the brain. The functions of the cord cannot, from its nature and endowments, be placed in such complete abeyance as those of the greater portion of the brain. The activity of the vital functions is not so closely connected with what we call the highest nerve centers as they are with those beneath them. As Dr. Marshall Hall long ago put it, the true spinal system never sleeps; and sleep is never more emphatically "nature's sweet restorer" than in such cases as those now under consideration. So that while bruises of the cord are not perhaps, as a rule, more severe than bruises of the brain, there is from these two causes the impossibility of obtaining such complete rest for the cord as for much of the brain, and the neglect of enforcing in the first instance such rest as may be practicable—a far greater risk of more remote mischief of a serious kind after injury of the cord than of the brain. No doubt the wisest practice in all these cases of injury, either of the cord or brain, even when in its early effects it may appear to be trivial, and the patient is disposed to disregard it altogether, it is to insist on immediate and unconditional rest, and as time goes on to relax this only very gradually under careful watching when no symptoms of any further disturbance appear.

How is it that so little attention has been paid to bruises of the lung, or rather, how is that they have been so commonly overlooked? That they not unfrequently occur is, I think, beyond dispute, and yet specimens of the injury are not shown in our museums, nor is it often recognized during life. The injury is caused, of course, by blows on the chest, and is usually associated with fracture of the ribs, especially when due to direct violence, but it may and does occur under certain conditions when the ribs are not fractured. Indeed, such injury may happen, and even laceration, without any visible injury of the chest wall, as, for instance, from the passage of a wheel over it. If at the time of the accident the glottis is closed, the lung is suddenly compressed by the external force against the retained air.

I believe the effects of contusion of the lung are usually confounded with pneumonia. In the severer cases some days after an injury to the chest wall the patient complains of more deep-seated distress; the respiration perhaps becomes quick-

ened; there is hacking cough, and soon rust-colored sputa are expectorated. Then there are dullness, crepitation and other signs of consolidated lung with fluid in the smaller tubes over a limited area. These symptoms are not, I think, usually associated with much dyspnœa or fever and other signs of constitutional disturbance of pneumonia, although I should not insist on this distinction as a marked one. What is more significant during the progress of the case is that the expectoration frequently contains little pellets, or even larger clots of dark blood, which have evidently formed in the smaller tubes as the result of the injury and in time become detached. After this repair and convalescence are usually rapid and uninterrupted. It is perhaps hardly needful to remark that bruising of the lung is not necessarily accompanied by emphysema, or pneumothorax, or even by hæmoptysis; but in some of these cases, as in those of wound or puncture of the lung from broken rib, there is, at the time of the accident, the expectoration of blood-stained frothy mucus; but this does not last, and some days usually elapse before further evidence of damaged lung is revealed. No doubt for the first day or so the signs of injury of the lung are masked by the more impressive effects of broken ribs, and perhaps of injured pleura.

These case for the most part do well, and in subjects otherwise healthy perhaps there is not much to apprehend. It is trite to say that they require care and should never be neglected; in some instances of unsound constitution or of damaged organs the patient is not altogether free from the risk of septic infection. The liver and kidneys are no doubt often bruised, and blood then readily escapes from the vessels of these vascular organs. Examination after death frequently reveals laceration of them, and specimens showing this form of injury may be seen in our museums. This of course almost invariably includes bruising; but cases of simple bruising without distinct laceration unquestionably occur. In the case of the liver during life the diagnosis can only be guessed at, and perhaps it is a wise precaution in doubtful cases to assume its existence. In the case of the kidney the pain is, I fancy, as a rule, more distinct and obvious in that of the liver, and here there is often in addition the significant symptom of blood in the urine. The spleen, too, sometimes suffers in this way, and even the pancreas. A remarkable instance of severe bruising of the pancreas I saw some years ago as the unfortunate result of compression of the abdominal aorta by a tourniquet for the cure of aneurysm of the vessel lower down. After death the large aneurysm was found almost completely filled with quite recent clot, and the pancreas, where it lay across the spine, was terribly bruised. It may be added that during the few hours that the patient survived the operation there were no particluar symptoms that could be directly referred to the damaged pancreas.

Every surgeon is familiar with the difficulty of exact diagnosis in injuries of the abdomen. Severe blows in that region, or more frequently perhaps the passage of the wheel of some vehicle over it, produce profound shock. The patient remains for some time in a state of more or less intense collapse, and the degree and duration of this state is an important element in the diagnosis of any local lesion. In some of these cases the subsequent rapid progress of the patient towards recovery indicates the absence of any considerable local lesion, and then the immediate effect of marked depression on the receipt of the injury we attribute to shock. In other cases the condition of collapse continues, and death rapidly supervenes. In these cases we expect to find some distinct lesion of some important viscus—rupture or complete division of the intestine, for example. Every one knows that even complete division of the whole tube of intestine may be the result of the passage of a wheel across the abdominal wall without any wound or opening in it. There is a third class of cases of great interest and importance, which terminate neither in death nor in rapid recovery. The state of collapse very gradually passes off, but the patient remains pale and depressed. The abdominal wall becomes rigid and remains so, and there is considerably tenderness, either somewhat localized or more generally diffused. The patient lies quietly on his back with the knees raised, and the respiratory action of the diaphragm is limited. The urine is usually passed without any material difficulty, but the bowels do not act. For the rest, the tongue is perhaps rather coated, but the temperature is not much raised, if raised at all, and the pulse

is not quickened. This state will last for several days, or even for a week or two, and end in recovery. Now in these cases there has probably been bruising of important structures. In some of them, perhaps, such mischief may be limited to the abdominal wall, and no doubt in many instances the symptoms and effects may be explained by such injury of the abdominal muscles. In other cases I think we must believe that some portion of the intestinal canal or other structure has been contused and is suffering from the effect. As a matter of fact, we sometimes see this condition when death is caused by other graver injury associated with it, and the occasional supervention of peritonitis confirms this view. The strongest evidence in its favor is furnished by the untoward result of mismanagement. If the patient be not kept at absolute rest for some considerable time, but is allowed to move too soon or too freely; still more, if he be not fed with the greatest care, to the rigid exclusion of all food likely to encourage or compel peristalic action; and worst of all, perhaps, if the routine purge "to clear out the bowels" be administered, the supervention of inflammation in the diastrous form of peritonitis tells its own tale. Hence, the importance in these cases of the most careful nursing and management. In none is there greater need for the observance of unqualified rest, of "rest in its physiological sense," as Hilton put it. And it is hardly necessary to add that the drug of chief value in these cases is opium; not merely, if need be, to relieve the pain and procure sleep, but to reduce as far as practicable the natural action of the intestinal canal. In such cases, for some days at least after the injury—as for some days after an operation for strangulated hernia—we should look upon an action of the bowels as a misfortune, and when at length it may seem prudent to permit it, it should be gently solicited by the use of some very simple enema, as, for instance, by the injection of a few ounces of warm olive oil. Again, it must be obvious that in all cases in which the extent of injury is at all doubtful, it is wisest to keep on the safe side, and to adhere to the line of treatment dictated from the graver point of view.

A word further. It is important to remember that the liability to become bruised from the same degree of injury varies very widely in different persons. While the vessels of some will resist considerable violence, those of others give way under a slight touch, and soon show the discoloration of a bruise; and this, of course, is significant of the state of the structures generally. When the vessels of superficial parts are thus very easily ruptured it indicates a fragility or unsoundness, which in other regions may lead to disastrous consequences. In such cases there are usually other signs of undue degeneration. Persons advanced in life, where perhaps women more frequently than men, and above all those with a preponderance of fat are usually the subjects of this condition. Bruising in these instances has the same significance, and for a similar reason, as epistaxis. When due to an adequate cause, or even to a strictly local condition, it has no grave import; but the case is very different when in advanced life it is provoked by trivial disturbance. Here is a striking case in point. A fat, elderly woman was brought to the hospital on account of some, not severe, accident to one of her legs. I saw her in the admission room, and there was no bruise or any sign of injury on her face. She was carried into one of the wards, and when in half an hour I saw her there I found her with two very "black eyes." Upon seeking an explanation of this I learned that her face had not been struck in any way, but that while being carried up a step or two into the ward she had received a sudden jerk, and this was the only cause to which the ecchymosis could be assigned. This led of course to a further careful examination of her state, and signs of a fatty heart and other symptoms of degeneration were soon revealed. In the course of two or three days she suddenly died. It is familiar knowledge to those who "train" and to many others that as the man gets into "condition" the flesh becomes firmer, and with this the liability to become bruised is very materially diminished. The importance of bearing this state of the tissues in mind in diagnosis and prognosis is obvious enough.—Savory, in *The Lancet.*

A Peculiar Case.—Dr. J. W. M., aged fifty-three years; native of Kentucky; family history good; no tuberculous history, or history of any venereal trouble; abstemious habits; jaundice thirty years ago; no sickness since; had

la grippe 1st January, 1891, light form; continued to ride until 1st of February, 1891; exposed to long rides, and to wet, rainy weather; suffered from headache and insomnia four days before going to bed on the 1st of February, 1891.

Prominent Symptoms.—Headache, oppressed breathing, rapid; obstinate constipation, pain along cervical vertebra; obstinate insomnia, lasting twenty-four days and nights continuously; urine, high colored, scanty, loaded with uric acid and the phosphate; no albumen nor sugar on repeated examination, sp. gr., 1010 to 1036 within twelve hours, *i. e.*, examine, say at 12 noon, 1010 at 6 or 7 P. M., as apt to 1036 or 1028; complete loss of appetite, with loathing of food; tongue heavily coated throughout with heavy white fur; pulse, 80 to 100; seldom had any fever, and then temperature never rose over 100° F.; excessive sweating, continuing far into convalescence; melancholic; great muscular prostration; impotence, following apparent recovery for some months; never weighed over one hundred and sixty-five pounds.

Present Condition.—Appetite and digestion good; bowels regular; urine normal, sp. gr. 1020 to 22; some phosphatic deposit, passed often but about normal quantity in twenty-four hours; no albumen or sugar; no impotence; weight, one hundred and eighty-four pounds; pulse, 80 to 85 per minute; breathing bad, oppressed, shallow, frequent, especially on least exertion; clumsy, but no loss of co-ordination; great muscular prostration on least exertion; lungs are all right; heart in normal condition, but weak, and pulse not as full and good as should be; sleeps well; before sickness was fearless among horses, and fond of driving wild, ungovernable ones, now is nervous and apprehensive among them; still somewhat melancholic; talks of dying and about the future state, an unusual foreign subject with him. His treatment was altogether tonic. Phosphorus, in form of die phos. acid entering largely. For the insomnia, all the hypnotics, both ancient and modern, were tried in vain for twenty-four days and nights, and then yielded to large hypodermic injections of morphine sulph. These had to be kept up for so long a time that the habit was formed, but broken up by gradual diminution of dose, until now he has not taken an injection for five or six months, although he is twenty pounds heavier than he ever was, yet the muscular weakness and the dyspnœa is as great as ever, and no prospects that I can see of improvement.

MISCONCEPTIONS AND MISNOMERS REVEALED BY MODERN GASTRIC RESEARCH.[1]—1. The conditions usually called lithæmia, chronic gout and oxaluria, in this country, are in reality almost always forms of toxæmia of gastric origin.

2. That the albuminoid diet, so often advised in these conditions, is frequently harmful and based on a misconception.

3. That toxæmia of gastric origin expresses itself in special symptoms which are sometimes misunderstood. That certain affections of the nervous system, the air-passages and the joints are, amongst others, the result of auto-intoxication.

From his case-book, Dr. Stockton reported a number of instances showing that neurasthenia, vertigo, persistent headache, insomnia, muscular-spasm, and epileptiform convulsions, naso-pharyngeal catarrh, laryngitis, tracheo-bronchitis, asthma, Bouchard's nodules, some cases of so-called athritis deformans and other joint troubles, depend upon gastro-intestinal toxæmia. These cases proved manageable by treatment directed to the digestion, as guided by a study of the gastric contents, although in most instances they had long resisted other lines of treatment.

Dr. Musser: I quite agree as to the necessity for local treatment in such cases, but I want to emphasize the necessity of general treatment and general management, also. In my care of such cases I have always been impressed with the efficacy and necessity of general treatment and management, the gastric condition being secondary. All such cases seem to arise from excessive wear and tear; and, whether by local treatment or general management, you must add to their nutrition.

Dr. H. M. Lyman: I wish to say a word as to the importance of considering the general condition of the patient. The etiology of these cases is generally con-

[1] Read by Dr. C. G. Stockton, Buffalo, before the Association of American Physicians; reported in the *Boston Med. and Surg. Jour.*

nected with a history of scrofula or the arthritic diathesis, and it is important to recognize the connection of the local disease with the general substratum. Topical treatment is not, however, rendered any less necessary.

Dr. C. G. Stockton: I do not advocate the treatment of these affections by any special plan of gastric medication or lavage, nor do I forget the importance of the general management of the cases. I wish to insist upon the utmost importance of guiding the general management of these cases upon the findings from the examination of the stomach. Just as our knowledge of certain diseases is improved by examination of the eye and urine, so our knowledge will be improved by examining the contents of the stomach. I think it is a mistake to regard these cases from the general standpoint as much as we have been in the habit of doing. While we should recognize that there is a failure in the nervous system, we should also realize that when the stomach fails, we have toxæmias which give rise to a great variety of evils, and by relieving these toxæmias we relieve our patient.

THE CURE OF INFECTIVE DISEASES.—G. and F. Klemperer, in the *Berliner Klinische Wochenscrhrift*, May 2, treats of this subject in regard to immunity induced subsequent to infection. The value of the immunity depends upon its degree and the rapidity with which it can be established. The most rapid method is by blood serum, as discovered by Behring and Kitasato. In animals the cure of several diseases has already been thus effected.

Every well-marked and acquired immunity is transferable to other animals. The serum treatment is a specific one. The authors have been able to establish immunity in the same rabbit against two separate infections, namely, that of the pneumococcus and that of mouse septicæmia. The difficulty of obtaining the serum must constitute an obstacle to hæmatotherapy, and hence a simpler method of establishing immunity is sought for. This consists in the introduction of an attenuated culture into the veins. By this process the protective substances have still to develop, whereas they are already present in the serum. Thus the immunity conferred by the former method occurs only after a few days, but that by the latter in a few hours. Previous failure by the first method has been due to the feebleness of the immunity induced. The degree of the immunity depends on the amount of the culture introduced. The difficulty lies in concentrating the latter. This the authors have effected by means of the air-pump down to one-tenth of its former volume, and without the application of too great heat. Against the pneumococcus infection some degree of the immunity is present on the following day. In a very virulent pneumococcus infection in rabbits this method does not succeed, but a less virulent infection can be easily cured. Thus, in addition to the serum treatment, a slowly-developing infection in animals can be cured by an immunity subsequently induced by the introduction of an attenuated culture into the veins.

The advantage of this method consists in the readiness with which the remedy may be prepared, the disadvantage in its uselessness against sudden and rapid fatal infection. In man the majority of the infective diseases develop slowly, so that they may permit of this method of treatment.—*Brit. Med. Jour.*

DECADENCE OF SURGICAL ANTISEPSIS IN ENGLAND.—In the *Northwestern Lancet*, the London letter repeats the assertion, that has been made elsewhere, that London surgeons have departed from their first love for antisepsis. The writer was surprised to see the instruments taken from their cases and then dipped in a perfunctory manner in the bath; after which they were used without further precaution. At the London Hospital, another visitor, a Frenchman, at the side of the writer, expressed some surprise, but admitted that he had been told that the English surgeons are no longer the strict observers of surgical cleanliness that they once were, and that Mr. Lister is the least cleanly of them all, in point of fact, the word "dirtiest" was the one employed by the French guest—a forcible expression to say the least.

HAD THIS MAN A VAGINA?—At a meeting held in the French Academy of Medicine on the 19th of April, 1892, Bœckel reported the case of a young man of twenty,

who had a hernia since infancy in the right injuinal region. On the left side he had a testicle of immense size, though on the right none could be felt. After having made an incision on this side, inward through the injuinal canal, an elongated whitish mass was encountered. This was found to consist of an atrophied uterus and fallopian tube, together with several cysts.—*Medicine Moderne*, May 12, 1892.

News and Miscellany.

THE lustrious Sir William Aitken, of Great Britain, died June 25, after forty-four years of most active and distinguished professional life.

AN intrepid writer in the *Medical Examiner* flies in the face of Providence and says that perhaps, far off in the dim future, human beings may be hatched by incubation from the female ovum. His idea is to catch the ovum in some clever manner by means of a new-fangled speculum, and transplant it to an artificial sac containing spermatozoa, and retained in a blood-warm substance which can be supplied with proper nourishment and air during the stage of development. He does not say how he would catch the spermatozoa, but in this manner he hopes to relieve the daughters of Eve from the curse "in sorrow thou shalt bring forth children."—*Doctor's Weekly*.

SIX MONTHS' INTERMENTS.—The following is a report of the interments in this city for the six months commencing December 26, 1891, and ending July 2, 1892, as collected from the weekly reports furnished by the Board of Health. There is also appended a comparison with similar periods in 1890 and 1891. In addition to the deaths from principal diseases there were deaths from the following rare or unusual causes: Carbuncle, 1; chickenpox, 1; elephantiasis, 1; hydrophobia, 2; lightning stroke, 1; rickets, 1; surgical shock, 19; vomiting, 1.

It will be seen that the deaths for the past six months exceeded those of the corresponding period of 1891, 2101, and of 1890, 1334. Deaths of diphtheria show an increase of 399 over those of 1891, and 438 more than in 1890. The deaths of heart disease increased 152 over those of 1891, and 186 over those of 1890. Scarlet fever was more fatal so far this year by 203 cases compared with 1891, and 289 cases compared with 1890. Typhoid fever shows a gratifying falling off in deaths for the past six months of 189 as compared with 1891, and of 106 compared with 1890. Influenza, or la grippe, carried off 318 people this year, against 106 in 1891, and 146 in 1890. Inflammation of the lungs was fatal in 1630 cases, against 1089 in 1891, and 1390 in 1890.

	1892.	1891.	1890.
Interments	13183	11082	11749
Adults	7490	6506	.....
Minors	5693	4576	.....
Males	6702	5568	6007
Females	6481	5414	5742
Boys	3023	2457	2538
Girls	2670	2119	2282
Born in United States	9953	8235	8719
Born in foreign countries	2977	2534	2634
Birthplace unknown	253	313	396
People of color	608	486	634
AGES.			
Under 1 year	2653	2339	2576
From 1 to 2 years	762	593	693
From 2 to 5 years	1098	683	724
From 5 to 10 years	622	431	334
From 10 to 15 years	203	190	166
From 15 to 20 years	355	340	335
From 20 to 30 years	1123	1089	1216
From 30 to 40 years	1201	1041	1112
From 40 to 50 years	1017	925	1055
From 50 to 60 years	1080	915	950
From 60 to 70 years	1230	1012	1112
From 70 to 80 years	1119	959	911
From 80 to 90 years	616	488	476
From 90 to 100 years	102	74	83
From 100 to 110 years	2	2	6
PRINCIPAL CAUSES OF DEATH.			
Alcoholism	38	51	43
Apoplexy	350	302	240
Bright's disease	318	255	238
Cancers	287	253	264
Casualties	233	184	182
Cholera infantum	220	207	261
Congestion of the brain	159	154	155
Congestion of the lungs	168	112	147
Consumption of the lungs	1529	1347	1552
Convulsions	504	470	441
Croup	234	199	231
Debility	181	171	265
Drowned	32	47	45
Diphtheria	688	289	250
Disease of the heart	800	648	612
Dropsy	68	62	67
Fever, scarlet	363	160	74
Fever, typhoid	265	454	371
Influenza	318	106	146
Inanition	280	219	252
Inflammation of the brain	345	397	409
Inflammation of the bronchi	420	298	334
Inflammation of the kidneys	161	118	123
Inflammation of the lungs	1630	1098	1390
Inflammation of the stomach and bowels	248	280	344
Marasmus	371	363	367
Old age	508	415	479
Paralysis	193	224	214
Sunstroke	4	8	1
Suicide	48	55	46
Teething	60	54	63
Tumors	57	59	54
Uræmia	117	110	78
Whooping-cough	57	72	71

WEEKLY Report of Interments in Philadelphia, from July 2 to July 9, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Alcoholism	4		Fever, typhoid	3	2
Apoplexy	4		Gangrene, senile	1	
Anæmia	1		Hemorrhage	2	1
Bright's disease	1	2	Indigestion		1
Burns and scalds		2	Inanition		13
Cancer	9		Inflam'n brain	3	12
Child birth	2		" bronchi	1	1
Congestive chill		1	" kidneys	3	2
Casualties	6		" heart	2	2
Congestion of the brain		8	" mouth		2
Congestion of the lungs	1		" lungs	2	9
Congestion of the bowels		1	" pericard'm	2	
Congestion of the liver		1	" peritone'm	3	2
Cholera infantum		97	" joints	1	
" morbus	2	3	" s. & bowels	8	18
Cirrhosis of the liver	1		" uterus	1	
Consumption of the lungs	40	7	" nerves	1	
Convulsions		16	Intussusception		2
" puerperal	2	1	Marasmus		20
Croup		3	Neuralgia of the heart		1
Cyanosis		3	Old age	9	
Debility	6	5	Paralysis	15	
Diarrhœa		4	Poisoning, opium	1	
Diphtheria		15	Pyæmia	1	
Disease of the heart	18	3	Rheumatism		1
Disease of the kidneys	1		Scrofula		1
Disease of the liver	3		Septicæmia	2	
Drowned	2		Softening of the brain	2	
Dropsy	3	1	Suicide	2	
Dysentery	4	2	Syphilis		1
Effusion of the brain		1	Tabes mesenterica		1
Epilepsy	2		Teething		3
Erysipelas		1	Tetanus	1	
Enlargement of the heart	1		Ulceration of the bowels	1	
Fever, scarlet		7	Uræmia	5	
			Whooping-cough		6
			Total	185	285

ARMY, NAVY AND MARINE HOSPITAL SERVICE.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from June 26 to July 11, 1892.

Lieutenant Colonel William D. Wolverton, Assistant Medical Purveyor, will, on the expiration of his present leave of absence, proceed to Fort Omaha, Nebraska, and report in person to the commanding officer of that post for temporary duty during the absence of Major Albert Hathruff, Surgeon, on leave.

First Lieutenant Isaac P. Ware, Assistant-Surgeon, U. S. Army, is relieved from duty at Fort Douglas, Utah, and will report in person to the commanding officer at Fort Logan, Colorado, for duty at that post, relieving Captain Wm. L. Kneedler, Assistant-Surgeon, U. S. Army.

Captain Kneedler, on being relieved, will report in person to the commanding officer Fort Mason, Cal., for duty at that station, relieving Captain Harry O. Perley, Assistant-Surgeon.

Captain Harry O. Perley, Assistant-Surgeon, on being relieved from duty at Fort Mason, California, will repair to Washington, D. C., and report in person to the Surgeon-General, U. S. Army, for duty in his office.

Captain William H. Corbusier, Assistant-Surgeon, U. S. Army, will proceed, at the proper time, to Island Lake, Michigan, and visit the camp of the Michigan State Troops during the period of the encampment at that place, commencing August 18, 1892.

The leave of absence granted Captain Henry S. T. Harris, Assistant-Surgeon, U. S. Army, is further extended one month.

Captain William Stevenson, Assistant-Surgeon, U. S. Army, will visit the camp of the Illinois National Guard at Springfield, Illinois, during the period of its encampment, commencing July 9 and ending August 21, 1892.

Leave of absence for one month, with permission to apply for an extension of one month, is granted Captain William O. Owen, Jr., Assistant-Surgeon, U. S. Army.

First Lieutenant Frank P. Meriwether, Assistant-Surgeon, U. S. Army, now on duty at Fort Adams, Rhode Island, will report in person to the commanding officer Madison Barracks, N. Y., for temporary duty at that post during the absence of Captain Henry S. Turrill, Assistant-Surgeon, U. S. Army.

First Lieutenant Charles F. Mason, Assistant-Surgeon, U. S. Army, on being relieved by Captain Raymond, will report in person to the commanding officer Fort Snelling, Minn., for duty at that post.

By direction of the Secretary of War, First Lieutenant Champe C. McCulloch, Jr., Assistant-Surgeon, U. S. Army, now on duty at Fort Sam Houston, Texas, will report in person to the commanding officer Fort Hancock, Texas, on July 1, 1892, for temporary duty at that post.

Captain Edward Everts, Assistant-Surgeon, U. S. Army, is relieved from duty at David's Island, N. Y, and will report in person to the commanding officer Fort Robinson, Neb., for duty at that post, relieving Captain Henry T Raymond, Assistant-Surgeon, U. S. Army.

Captain Raymond, on being relieved by Captain Everts, will report in person to the commanding officer Fort Washakie, Wyoming, for duty at that post, relieving First Lieutenant Charles F. Mason, Assistant-Surgeon, U. S. Army.

Leave of absence for one month, with permission to apply for an extension of one month, is granted Colonel Charles Page, Assistant-Surgeon General, U. S. Army.

In addition to his other duties Major J. V. D. Middleton, Surgeon, U. S. Army, will take charge of the office and perform the duties of the Medical Director, Department of the East, during the absence on leave of Colonel Page, Medical Director.

The Times and Register.

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PAGE

ORIGINAL ARTICLES:

SEPIC DANGERS OF HYPODERMIC INJECTION, CATHETERIZATION AND IRRIGATION OF WOUNDS. By Frank J. Thornbury, M.D. - - - - - - - - 105

DRY CELL BATTERIES. By Ernest B. Sangree, A.M., M.D. - - - - - - - - - - - - - - - - 110

SOCIETY NOTES:

THE AMERICAN HEALTH RESORT ASSOCIATION - 111

MEETING OF THE MICHIGAN STATE BOARD OF HEALTH - - - - - - - - - - - - - - - - - 112

EDITORIAL:

WILL WE HAVE CHOLERA IN AMERICA? - - - - 114

AN EXPLANATION OF THE INDIGESTIBILITY OF CERTAIN ARTICLES - - - - - - - - - - - - 114

TO STUDY THE BEST METHODS OF ROAD IMPROVEMENT - - - - - - - - - - - - - - - - 115

TAMMANY HALL AND THE NEW YORK BOARD OF HEALTH - - - - - - - - - - - - - - - - 116

ANNOTATION:

Report of the Michigan State Board of Health - - 117

PAGE

LETTERS TO THE EDITOR:

A Curiosity. "*Missouri*" - - - - - - - - - - 117

A Tribute to a Noble Woman. *Price* - - - - - - 117

BOOK NOTICE:

King's Eclectic Obstetrics. *Wintermute* - - - - 118

THE MEDICAL DIGEST:

The Use of Alkalies in Pruritus (*Lange*)—Infectious Broncho-Pneumonia of Intestinal Origin in Children (*Gaston and Renard*)—Treatment of Diphtheria with Arsenite of Copper (*Latta*)—New Contributions to the Physiology of the Heart (*Medical Record*)—The March of Cholera (*British Medical Journal*)—Asiatic Cholera—A Case of Leopard Bite (*Simpson*)—A New Treatment for Cancerous Affections (*Carpenter*)—Broncho-Pneumonia of Intestinal Origin (*Journal Amer. Med. Association*)—"A Class of Cases Found in the Office of Every Physician" (*Cordier*)—Treatment of Cancer (*Woodhead*) - - - - - - - - - 113, 119-130

MEDICAL NEWS AND MISCELLANY - - - - 130

NOTES AND ITEMS - - - - - - - - - - iv, viii

Original Articles.

SEPTIC DANGERS OF HYPODERMIC INJECTION, CATHETERIZATION AND IRRIGATION OF WOUNDS.[1]

BY FRANK J. THORNBURY, M.D.,

Late Senior Resident Physician Cincinnati Hospital, Cincinnati, Ohio; Demonstrator of Bacteriology Medical Department University of Buffalo.

THE extensive range of utility attained by the hypodermic administration of drugs and the injection of medicated fluids into organs merits a very special consideration, in view of certain microscopic revelations of recent date.

The relation of cause to effect existing between the original occurrence of abscess in association with the use of the hypodermic syringe has been recognized since early in the employment of this instrument. It is probably only by reason of the rapid absorption of the injected fluid that local infection does not more often take place.

The increased liability to general septic infection on the other hand, rests on the same basis.

We have the one instance in which four consecutive tabies cases were inoculated with erysipelas, and three of them died. Two typhoid cases in a state of collapse developed a rapidly fatal purulent œdema following the injection of tincture of musk. Two cases of fatal phlegmon resulted from the subcutaneous administration of quinine.

The inoculation of anthrax in the injection of a solution of arsenic has been observed in the Breslau Clinic of Dermatology. Two cases of tuberculosis are lately recorded, one by Kanig and the other by Eiselsburg.

There has been in general too little attention given to the liability of the pres-

[1] Read at the annual meeting of the Medical Association of Central New York, Syracuse, May 30, 1892.

ence of organisms in injected fluids. Schimmelbusch and Hohl have recently shown that the hypodermic solutions obtained from various apothecary shops in Berlin contain vast numbers of live bacteria. The germs present in a 1 per cent. mur. pilocarpine solution were innumerable. In an ordinary solution of ergotine there were 10,000 bacteria to the c. c.m.

Solutions of atropine, morphine and cocaine muriate were also rich in organisms.

The morphine solution in the Berlin University Surgical Clinic preserved in vials with glass stoppers, and renewed every six to eight weeks, contained, as shown by repeated examinations, from 200 to 300 bacteria per cubic centimeter.

The only solutions entirely free from micro-organisms were: Apomorphine hydrochloricum, 10 per cent.; camphor oil, 10 per cent.; bisulphate of quinine, 10 per cent.; antipyrine, 50 per cent.; the mercury combinations and concentrated solutions of other drugs, as 10 per cent. solution of cocaine.

It is quite important that we should recognize that the pus-formers, the erysipelas streptococcus and other pathogenetic organisms multiply in the fluids which we are injecting into the body.

Ferrari has recently shown that in 1 per cent. solutions of morphine and atropine the organisms not only live for weeks, but indeed proliferate with marvelous rapidity, and form pure cultures in the fluid.

In glycerine the staphylococcus pyogenes aureus remain alive and active for six days, then gradually die. In 2 per cent. morphine solutions they retain their vitality for twenty-four hours; in 10 per cent. cocaine solutions for two hours. Only in the stronger solutions, as ether, musk, 10 to 20 quinine bi-sulphate, 50 per cent. antipyrine, and 20 per cent. caffeine benzoicum, do they die at once. In 0.15; 30.0 strychnine citrate bacteria live for eight days. In 1 per cent. hydrochlorate of cocaine, after nine days thousands were still alive. The fluids which are or may be rich in germs are: One per cent. solution atropine sulphuricum; 1 per cent. morphine muriaticum; 1 per cent. cocaine hydrochlorate; 1 per cent. pilocarpine solution, and solutions of ergotine.

It is not difficult to understand then how dangerous may be the administration of hypodermics prepared in water, non-sterilized, and injected with a syringe that is unclean.

Regarding the second subject in the title of my paper, we now stand in the presence of very positive facts. As early as 1860 Pasteur laid claim to bacteria as being causative in the decomposition of the urine, whether already voided or still in the bladder, and now on the bases of exact bacteriological tests, Rosving demonstrates that staphylo- and streptococci, identical with pathogenic species, are the usual cause of severe cystitis. In 13 cases out of 20 of purulent cystitis the younger Schnitzler was able to trace the cause to a certain bacteria which he named urobacillus pyogenes septicus.

These and others we have as etiological in cystitis aside from the micrococcus urea of alkaline ammoniacal decomposition. The latter micrococci urea come principally from the atmosphere. In absence of oxygen they cannot develop.

Two facts we have positively substantiated:

1. That the urine in the healthy bladder is normally free from bacteria.

2. That changes in the composition of the urine in the bladder are invariably due to bacteria.

Lister, Pasteur and various other investigators have proved the absence of organisms in the urine. Absolutely convincing is the evidence recently furnished by Cazeneuve and Livon.

These investigators induced retention of urine in dogs by ligating the urethra. After the bladder became filled, the ureters were ligated and the bladder extirpated. The organ was kept in the laboratory, under incubation temperature, for several days, and no decomposition took place. This proves conclusively that changes in the urine do not occur without external influences, and that the germs of urinary decomposition are not present in the bladder unless they are introduced from without. We will not stop to discuss the easy possibility of its occurrence and the disastrous consequences of an inflammation ascending to the kidneys through the ureters from the urethra and bladder.

Suffice it to state that the introduction of instruments, especially catheters and bougies, can produce the most severe forms of infection. A catheterization cystitis is not an infrequent occurrence. There are few practitioners who have not at

sometime or other observed it after a single or repeated catheterizations, infection due simply to unclean instruments. Experiments upon animals have proven how readily possible infection and propagation by contiguity inflammation through the genito-urinary tract is, after inoculation with certain pathogenic organisms. By the local inoculation of the healthy bladder of animals with the uro bacillus pyogenes septicus, Schnitzler was able to produce the most virulent cystitis. It is not sufficient to simply dip the sounds, catheters and bougies in antiseptic solutions or lubricating oils. Many of these solutions themselves contain live bacteria.

A most thorough sterilization is necessary. The metal instruments, whether bougies or catheters, permit very readily of being boiled or submerged in carbolic acid or alcohol without injuring them, and each time after being used they should be most thoroughly disinfected. The gum catheters are not so easily sterilized; they tolerate the steam or boiling soda but once. It is, therefore, necessary that they be kept continually submerged in strong carbolic solution, or frequently renewed bi-chloride. Each time before being introduced they should be rubbed with sterilized gauze, or washed in sterilized water, to remove the antiseptic, which is very injurious to the urethral canal.

The lack instruments tolerate neither heat nor antiseptics well. They soon become unfit for use—hence Albarran invented the caoutchouc catheter, which tolerates both boiling and corrosive sublimate. These catheters, however, do not as yet seem to have come into very general use.

Schimmelbusch has found a mechanical antiseptic in the act of rubbing an instrument for a minute or two with sterile gauze. He infected red lack catheters with pure cultures of various bacteria, and found that, after one minute of active rubbing with a moist piece, then dry, sterile gauze, the instruments were completely sterilized.

We have the two associated factors of friction and heat as explanatory. To cleanse the lumen of the catheter, hot water, hot sublimate or carbolic solutions may be injected through it. Farcas has invented a small steel apparatus consisting of a water kettle with attached steam compartment and connected tube. The water is boiled by means of a small spirit-lamp placed underneath the boiler. The steam generated is connected through the lumen of the catheter by the tube leading from the steam-boiler. Thus a reliable and easy sterilization is affected.

In getting into the bladder, we enter through a bacteria enriched canal. Lustgarten and Vannaberg, also Rosving, have found diverse forms of micro-organisms in the urethra, all of which are capable of causing urinary decomposition.

It is not surprising, then, that cystitis should follow catheterization, and that urethritis and vesical catarrh should result from the continued presence of a catheter after an operation for stone. The often serious consequences of catheterization are dependent entirely upon infection through unclean instruments. The catheter previously rendered aseptic does not lead to any bad results following its introduction.

Of course, the passing of an instrument in case of inflammation of the urethra is absolutely contra indicated. There should be no hesitation under these circumstances in resorting to puncture until evacuation is urgently demanded. Always before catheterizing, the orificum urethra should be cautiously disinfected. As a further prophylactic precaution, it may be well to wash out the urethral canal.

We have learned much of late regarding wound irrigation, and the subject of antiseptic solutions and the bacterial contents of water.

Water from the interior of the earth, as that produced by artesian wells, is entirely free from germs; but water which stands or flows over the bacteria enriched ground surface, contaminated through decomposed organic material, contains myriads of living organisms.

The numbers of bacteria fluctuate between the few per cu. c.m. contained in ordinary well and spring water to the millions to the cu. c.m. found in river and canal water.

For a long time it has been the popular belief that water might be the source of various forms of infection, and with our present understanding of intestinal mycosis, we know that not only cholera and typhoid, but many other serious alimentary diseases, are directly traceable to water.

It is true that the water bacilli are for the most part those which do not belong to wound infection, although some of the

most virulent varieties of bacteria have repeatedly been found in water.

It is only necessary to recall the fact that the most disastrous of the animal septicæmia—namely, the rabbit septicæmia bacillus discovered by Koch and Gaffgy—was first found in a tributary of the Spree river, flowing through Berlin.

Rinantro Mori has isolated from canal water three pathogenic bacteria. According to Lortet and Despeignes, the Rhone river water, of Lyons, contains scarcely anything excepting organisms which are pathogenic. The filter residue and precipitate injected subcutaneously into guinea-pigs caused a rapidly-fatal septicæmia and pyæmia. Repeatedly the presence of pyogenic staphylococci have been detected in the examination of river and well water. With a knowledge of the virulent characteristics of these bacteria, such water would be drunk with much hesitation.

The hydrant water of Freiburg, Germany, frequently contains the green pus bacillus, pyogenes. Most bacteria can maintain their vitality for weeks, and even months, in water. The water serves as a culture medium for many; they thrive and multiply in it by spontaneous proliferation.

The bacteriological tests of Cramer found that Zurich hydrant water increased 27,000 times in its septic contents after standing for twenty-four hours. And Leon demonstrated that the supply-water of Munich, which contained only five bacteria per cu. c.m., after standing for five days showed 500,000 germs to the cu. c.m.

Certain of the saprophytic bacteria grow best in water, and they here come to a luxuriant development. According to Wolffhagel and Ridel, sterilized river water mixed with distilled water is a favorable culture medium for anthrax, and Gioxa has shown that this is true of other pathogenic bacteria which are of interest to us aside from anthrax.

Reference to the chart prepared by Hulm, giving results of his investigations into the water-supply of the city of Bres lau, is quite sufficient to convince us of the multiplicity of forms of parasitic life found in water.

It is conclusively demonstrated that water may be a source of much danger from hygienic and bacteriological standpoints. It seems positively unjustifiable to permit its application to sounds without first subjecting it to a thorough sterilization.

How utterly absurd is the irrigation of pure, fresh lacerations made sterile by nature's blood serum, such irrigation carrying into the wound thousands of more or less dangerous organisms, and still permitting of the delusion that the wound is being cleansed.

The blood serum itself is a most efficient antiseptic, probably by reason of the existence in it of a globulin.

Irrigation with sterilized water would not be so bad, but even this is unnecessary. Dry treatment of wounds is the present position of surgical science.

Uses of the antiseptic solutions like the spray never was founded on exact scientific facts. Our obligations to conservatism are accomplished through meeting the demands of asepsis.

A series of investigations, recently conducted in the Hygenic Institute of Berlin, demonstrated that the quantity of bacteria in the Spree river, flowing close to the Von Bergmann clinic, contained 3,200 to 154,000 to the cubic centimeter. The average number was 37,525 germs to the cubic cm.

Take, now, for illustration, the frequent instances of a man receiving a wound of, say, one-quarter decimeter in extent, allowing one-quarter of an hour exposure, previous to the time of his arrival at the clinic. He would, according to estimation, as to the relatively unimportant bacterial contents of air, receive about 60 to 70 germs distributed superficially over the bleeding surface.

In accordance with the usual custom, let the wound now be irrigated slowly and carefully with perhaps one liter of water. There is received in the attempt at "cleansing," about 37,000,000 germs, if it is the Spree river water that has been used. To add further contamination there is frequently a soiled handkerchief or cloth, rich in bacilli, wrapped around the injured part. Is it any wonder then that suppuration should occur?

Hygienists have agitated the feasibility of providing an especially pure water for drinking, cooking and surgical purposes, allowing the ordinary water for common use; but such a division of the water supply is hardly practicable, and we must be contented with an attempt at maintaining the entire water supply as scrupuously non-contaminated as possible.

While we can hardly yet sterilize the entire water-supply of a city, demonstrated facts in hygiene demand that we boil the water used about operations, *i.e.*, in cleansing the hands of the operator, the area of the operation, the instruments and utensils.

As stated above, we, of course, do not speak of irrigating the wound itself any longer. Experience and foregoing facts have shown this to be a bad practice—a practice both useless and harmful. Nature is allowing pure aseptic blood to flow out of the bottom of the wound. Then coagulation occurs and forms the best possible provisional protection.

Why, then, shall we be so unreasonable and unscientific as to pour water containing germs or irritating or excoriating chemical solutions as the so-called "antiseptics" over the wound to defeat nature's efforts. It is simply required that we avoid contamination by keeping our instruments, hands and dressings clean, and observe the proper preparatory and after precautions.

Styptics are also relegated to the past, and are chiefly of historic interest now. They did harm enough in injuring uninjured tissues and contaminating wounds aseptic by nature. Simple compression is the substitute in all their former wide range of application.

Precipitation by the addition of some finely powdered and insoluble substance, filtration by means of sand or the Pasteur-Chamberlain filter, and then destroying the germs by the addition of antiseptics and sterilization by heat are the various means of rendering water fit for surgical use.

When water is allowed to stand for a time, of course the bacteria settle to the bottom, in accordance with the laws of gravity. The precipitation may be further facilitated by the addition of sand, calcium carbonate, or certain other finely granular substances. Regarding filtration, by reason of the fact that water in the interior of the earth is free from bacteria, it has been thought that we might imitate nature in so far as to be able to extract from hydrant water its germs and impurities by a process of filtration; but such a degree of perfection we have, unfortunately, not as yet been able to attain.

The Pasteur-Chamberlain filter, while valuable and capable of markedly improving the quality of the water, does not render it reliably free from bacteria. Perhaps for the first four or five days there are no germs present, and it functionates fairly well; but after this time, the quantity of water which the filter will allow to pass, gradually diminishes, the pores become partially occluded, and, finally, germs filter through.

The water works for Berlin, at Stralau, combining a filtration of the Spree river water, which contains originally 100,000 bacteria to the cb. cm., greatly improve the quality of the supply, but never render the water entirely free from microorganisms. The antisepticising of water by the addition of chemical substances, merits just a few explanatory statements for the correction of certain erroneous ideas, which I believe to exist.

Bichloride of mercury does not insure immediate death of everything in the way of germs, as ordinarily supposed. Staphylococcus pyogenes and bacillus pyocyanus live for one-quarter of an hour in a one per cent. solution. Anthrax spores resist a one per cent. solution for twenty-four hours. Boracic acid, ammonia, and absolute alcohol have no influence upon them. They survive a five per cent. carbolic solution for days. Tetanus, tubercle and spores of other pathogenic bacteria present similar degrees of resistence.

Clear spring water, in which the individual bacilli are suspended, isolated, may be disinfected, but the highly contaminated water of rivers and ponds, containing gross visible masses of impurity, rich in bacteria, does not permit of being rendered sterile by the addition of antiseptics. Heat is the only absolute method—simple in its application, most rational and reliable. Anthrax, the most resistant spores known to us, are completely destroyed by boiling in water for two minutes. Five minutes of boiling them must remove every reasonable possibility of any germs remaining alive.

Miquel found that of 1,000 bacteria in water, 955 were destroyed by short boiling. Water of the river Rhone, which contained 33,000 bacteria to the liter, as revealed by investigations, lost through boiling all but 941 bacteria, or over 97 per cent. Bacteria which resist boiling water, are only such as possibly the hay bacillus, *i. e.*, non-pathogenic, and consequently unimportant.

The absolute certainty of heat sterilization and its readiness of application,

strongly recommends that every surgeon shall provide a sufficient quantity of sterilized water for use in his operating-room or clinic, and as there are bacteria that thrive and multiply in water, it is necessary that after boiling it be closed hermetically, or, preferably, boiled fresh each time it is needed.

Sterilizing in bottles is only adapted to private use; for hospitals and clinics a special apparatus is necessary. This demand is supplied admirably in the Fritch sterilizer.[1] The latter consists of circular boiler, which contains a quantity of water heated by a bifurcated gas jet placed underneath. Running through the center of the boiler is a coil of tubing, through which water flows from the hydrant and cools the water in the boiler, so it may be used at once.

When, in case of emergency, sterilized water cannot be had, the best substitute is found in bichloride of mercury, first made known to surgery by Professor Von Bergmann. While it does not insure absolute death of certain over resistent spores in clear water, it reduces to a marked degree the bacterial contents and renders inert the dangerous pus formers. But to prevent the formation of insoluble compounds of the bichloride with alkaline earths of well and spring water, an equal quantity of chloride sodium should be added. Of course, boracic, salicylic and carbolic acid solutions, if used at all, should only be applied in previously sterilized water, as they have little influence upon anthrax and certain other over-resistent spores. As Koch demonstrated a long time since, antiseptic oils are ineffectual.

In the first place, the chemical substance does not dissolve thoroughly in the oil. Secondly, the oil does not permeate the septic material. Silk threads, impregnated with pus, and then dipped into oil, may be submerged in 1 to 200 bichloride solution for days and weeks without injuring the bacteria.

Analogous instances are found in the attempts at destroying the bacteria imbedded in the fat and sebaceous secretions of the skin. Thus, we see the absurdity of simply washing the hands superficially, or rinsing them in bichloride, and also the uncertainty of attempts at sterilizing water or oil by the addition of this and other chemicals. The heat sterilization should be invariably resorted to, and the addition of antiseptics given a secondary consideration. In the instance of cleansing the hands, the soap and sterilized water, ether and alcohol process must be gone through with.

[1] Obtainable of Wilmot, Castle & Co., Rochester, N. Y.

DRY-CELL BATTERIES.

By ERNEST B. SANGREE, A.M., M.D.,
Demonstrator of Histology in the Medico Chirurgical College of Philadelphia.

SOME months ago I read an article by one of our leading medical electricians, in the course of which he referred very disparagingly to the dry cell batteries, and strongly advised prospective purchasers to eschew the dry and stick to the wet. It seems he was out of the city somewhere, and needing a battery for diagnostic or curative purposes, I forget which, had brought to him a bran new fifty cell dry cell galvanic battery. Upon attempting to use it, however, not a particle of current could be gotten, and as the cells were boxed up tight out of sight in a metal box, and the connections all concealed, he was unable to find the cause of the trouble and compelled to forego the use of a battery. Stimulated by reading this article, I set about testing an exactly similar battery which I had bought about six months before. To my surprise and disgust I found that some twenty-five of the cells in the middle portion of the battery would not give a particle of current. As I had so far used only a few cells at a time, and these the end ones, this condition of affairs had not been noticed. Proceeding to investigate the cause, I unscrewed the bottom from the metal box containing the cells, and there found these twenty-five cells reduced pretty well to a jelly, the now semi-liquid contents forming a layer on the bottom of the box. In addition to this macerated electricity, I noticed that some of the test-tube-like glass cups in which the electro genetic substance had been held, were broken, and small bits of broken glass interspersed the costly coating of the box. All these facts I promptly detailed to the manufacturers, at the same time suggesting that I should like to have what I paid for, namely, a perfect instrument. They replied that the battery was all right when it was sent to me, and that I had short circuited it. To this I rejoined, that the battery had never been

out of my hands; that I had always disconnected the instrument immediately after using; that I was therefore confident I had never short-circuited it; and that, moreover, even if I had short-circuited the battery, such an action would not have broken the little glass cups. In return for this they simply insisted that they knew more about dry cells than I did, and briefly reiterated the charge of short circuiting. As no one but the makers can refill these batteries, and no one knows this better than they, I was, of course, at a great disadvantage in this interchange of courtesies, for I was compelled either to send the battery back to them, to go without any or to buy another. I chose the first as the least expensive course; and when the bill came, I found that I could add $7.50 to the first cost of the battery, and put the whole to the account of "experience."

It will hardly be doubted, therefore, that I strongly endorse the advice of the electrician alluded to, with regard to the kind of battery to get. Do not invest in a dry cell battery. Do not buy an instrument that is boxed up tight, and the inner workings of which are unknown. It is like those trades of our youth, in which we bartered knife for knife, "sight unseen," and perhaps secured merely an empty knife handle from our too smart companion in exchange for our own ancient, but still fairly serviceable, "toad-sticker." Get a wet cell battery. It does not look quite so pretty, perhaps, but you can see all the connections; there is nothing hidden; and, when the electricity weakens or disappears, a small sum will replenish the strength, and you will not be compelled to box up your instrument, express it to the maker and pay thirty cents per cell for refilling.

Society Notes.

THE AMERICAN HEALTH RESORT ASSOCIATION.

THIS Association met at the Tremont House, Chicago, June 30, and held three sessions.

There were present delegates representing Canada, Michigan, Massachusetts, Wisconsin, Florida, New Hampshire, New York, Pennsylvania, California, Illinois, Vermont, Colorado, Texas, Iowa, New Mexico and Central America.

A large correspondence was read by W. A. Chatterton, Secretary, from the absent members in various parts of the country.

The President, T. C. Duncan, M.D., of Chicago, then delivered a lengthy address, in which he outlined the good work of the Association, and how it was appreciated by the profession, enabling them to select climates adapted for the various cases of consumption. From reports received from the winter points, New Mexico had proven the most satisfactory. This is of interest to the profession who are trying to save some of the "hundred thousand consumptives" who die annually in this country.

Dr. J. F. Danter, of Toronto, Canada, read a paper on the "Climates and Resorts of British America."

"A Report on the Climate of Manitoba" was read, from Dr. Clark, of Winnipeg.

"The Climate of New Brunswick" was presented by Dr. J. Z. Currie.

From these reports it seems that there are a large number of consumptives in Canada, especially in the eastern provinces.

Dr. Adam Miller read a paper on "Sun Spots and Magnetic Influence in Disease."

"The Climate of Nebraska" was presented by Dr. Brown.

"The Climate of California and its Resorts" was presented in papers by Drs. J. D. Hartley and S. W. Andrews, of Chicago.

Dr. W. P. Roberts, of Boston, read "A Report on the Climate of New England," in which he reported that 15,000 die annually there from consumption.

"Consumption in Michigan," was the subject of a paper by Dr. Veenboer.

Dr. O. W. Gordon, of Council Bluffs, reported his disappointment in visiting various resorts, and spoke highly of New Mexico.

A report from Dr. A. Petin, of Las Cruces, N. M., formerly of Paris, was read, in which he said they had almost constant sunshine, less than two inches of precipitation in twenty-eight months, and that consumptives sent there were all doing well.

"A Report on the Adirondack Region" was read from Dr. Skinner.

Dr. B. W. James, of Philadelphia, contributed a paper on "Climate Maxims."

"The Climate of Costa Rica," was presented by Dr. Buchanan.

Dr. A. S. Butler reported on "The Climate of Honduras."

"Texas as a Resort for Consumptives" was the title of a paper by Dr. Marshall.

Reports on mineral waters were presented from Las Vegas, Hot Springs, N. M., Eureka Springs, Ojo Caliente Hot Springs, N. M., Costa Rica and Londonderry.

Professor I. N. Danforth gave an address on "Mineral Waters, their Analyses and Uses."

He said the profession was being imposed upon by imperfect and fraudulent analyses. In the first stage of Bright's disease, he thought that bland water should be used, and in the second Lithia waters.

Professor W. S. Haines made a valuable report on "Bacteria in Mineral and Potable Waters." In some mineral waters he found two bacteria to the cubic centimeter, and in some drinking water he found as high as 8,000.

A large number of members were admitted.

It was reported that a Congress of Climatologists would meet in Chicago next year, and it was voted that the Association meet with it.

The following officers were elected: President, T. C. Duncan. M.D., Chicago; First Vice-President, J. F. Danter, M.D., Toronto, Canada; Second Vice-President, I. N. Danforth, M.D., Chicago; Third Vice-President, W. P. Roberts, M.D., Boston Mass.; Treasurer, T. S. Hoyne, M.D., Chicago; Recording Secretary, W. A. Chatterton, Chicago; Corresponding Secretary, J. D. Hartley, M.D., Chicago; W. W. Van Baun, M.D., Philadelphia; Professor W. S. Haines, M.D., Chicago.

The full proceedings and papers will be published shortly, and all members will be supplied with these valuable and interesting transactions. For further particulars, address

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1204 MILWAUKEE AVE., Chicago, Ill.

—*Journal of the American Med. Asso.*

THE *New York-Post Graduate* advises dropping the title of "Doctor" as a designation of medical men. *How many will agree?*

MEETING OF THE MICHIGAN STATE BOARD OF HEALTH.

July 12, 1892.

RELATIVE to the reported presence of cholera in foreign countries, and the possibility of its being brought to this country, Dr. Baker remarked that it would be a particularly unfortunate time if cholera should soon reach Chicago or Detroit, because it tends to spread in much the same ways as typhoid fever, only with much greater rapidity, and typhoid fever is unusually prevalent in Chicago, and appears to have been increasing lately in Detroit. If cholera should gain entrance to either city, so many of our people visit those cities that we might soon find cholera spread in many places throughout Michigan. This office is prepared to issue circulars, already printed, advising local health officers just how to restrict cholera.

Secretary Baker stated that during the quarter, reports had been received and action taken on 451 outbreaks of the dangerous diseases in Michigan, including two outbreaks of small-pox, each confined to the first case; 1,091 pages of letter book have been used in copying the correspondence of the office (not including postal cards, printed or hektographed letters). There were 2,159 pages hektographed, of which 1,068 were notices to health officers, of infected immigrants destined to their localities. During the quarter there had been received, mostly in exchange for publications of the Board, 387 journals (weeklies, monthlies and semi-monthlies), and sixty-eight books and pamphlets; making the total number 8,229 in the library of the Board (excluding journals not yet bound).

The Secretary presented the subject of infected immigrants, and, to illustrate a point, read a letter from a township health officer stating that he had found, isolated and vaccinated the person of whom he was notified as possibly infected with small-pox, also reporting his action concerning one of the immigrants, of whom he had received notice, who had come down with measles. The expense incident to these cases was about $17. He thought the National Government might go a step further and detain at the seaboard those immigrants likely to be infected.

The Secretary presented the subject of a "Sanitary Day," after the manner of Arbor Day, Labor Day, etc., which had been proposed in Pennsylvania, where it was designed to have a day set apart for general and special "cleaning up." His opinion having been asked, he had expressed the view that it would be a good thing, but he thought a much more important sanitary day would be such an one as he had proposed at the last meeting of the Michigan Medical Society, namely, one provided for by a law similar to the one providing for the annual school meeting—a sanitary meeting which should determine the amount of money to be raised for public health purposes. This would supply occasion for placing facts, as to the restriction of the most dangerous diseases, before the voters who control the expenditures. School money is voted by the people after the subject has been carefully put before them. The interests of health and life of the whole people, including the children, are of more importance than the school education of the children alone. The health interests suffer because they have not been supported by the people. Dr. Baker believes they would be properly supported if facts were carefully put before the people every year at a sanitary meeting, similar to the school meeting in September.

The minutes of the meeting in Detroit of members of the State and of the city Board of Health and others, were presented, as also additional data obtained by correspondence, tending to show that some of the most dangerous diseases are not being restricted in Detroit; that this is, in some measure, due to the absence of a proper public opinion, such as is built up in those localities in which the methods of the State Board of Health are accepted and enforced; one important method, not enforced in Detroit, being the distribution to the neighbors of houses placarded as infected, of pamphlets stating the law and the best measures for the restriction of the particular disease then threatening. In time such pamphlets, endorsed and issued by the authority of the State Board of Health, reach all the people, and build up such a public sentiment that the most dangerous diseases can be restricted.

The Use of Alkalies in Pruritus (Lange).—In four cases of rebellious pruritus the author found that the urine was loaded with uric acid and urates. He prescribed alkalies, such as bicarbonate of soda, carbonate of lithium, alkaline waters, etc., with excellent results and finally complete cures.

—*Nouveaux Remèdiés.*—Translated by E. W. Bing, M.D.

Infectious Broncho-Pneumonia of Intestinal Origin in Children.—The disease is characterized by diarrhœa, thoracic signs and fever.

In the average case, after two to six days of diarrhœa, the condition shows itself and is announced by fever, cough, and dyspnœa. The broncho-pneumonic case keeps its interesting signs—inflated belly, which is sensitive; enlarged liver, foul tongue, etc. The pulmonary lesions, broncho-pneumonia and congestion, have a slowly-advancing (serpigenous) march.

Beside this form may be seen (*a*) a choleriform variety, especially in the debilitated, with abundant and fetid stools, and death inside of forty-eight hours, from collapse; (*b*) a typhoid form with, in the commencement, not much elevation of temperature, but with signs of ataxia. The abdominal symptoms are less pronounced than in the former case, and death results from the pulmonary lesion; (*c*) a prolonged remittent variety (Sevestre) lasting a month or more, in which the diarrhœa and pulmonary signs increase, as treatment is relaxed; cure is rare, tuberculosis frequent; (*d*) a common, light variety, lasting a few days, and yielding easily to an intestinal antiseptic.

Bullæ, erythema, vesicular eruptions of the buttocks and thighs, etc., may supervene, as complications, also otitis and mastoid abscess. The predisposing causes are childhood, a hot season, defective hygiene, chilling of the body, etc.

The agent of the disease seemed especially to be the pneumococcus in eight cases, the staphylococcus in three, the bacterium coli in three, the encapsuled bacillus in two. The microbes may be associated. The conclusion is that broncho-pneumonias are infectious, superadded to a state of feebleness produced by the diarrhœa, which, perhaps, increases their virulence.

—Gaston and Renard, in *Rev. Generale de Med.*—Translated by E. W. Bing, M.D.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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WILL WE HAVE CHOLERA IN AMERICA?

CERTAIN diseases have their place of origin, due both to climatic influence and the habits of the people. The poison which develops in those places is conveyed along routes of travel and commerce until all the counties which offer favorable conditions for its reception have been reached. The fearful and costly epidemic of influenza, spreading from Southern Russia to almost the entire habitable globe, is still fresh in our minds.

Western Asia and Southern Russia at almost all times afford especially favorable conditions for the development of that most fatal disease—Asiatic cholera. That we do not have it constantly with us is due to the faithful activity of our inadequately supported public health authorities.

This year, however, we have a genuine "cholera scare," and, we believe, a well-founded one. Early transported from Western Asia into Southern Russia, the disease has steadily advanced along the most frequented routes, until it has obtained a firm footing in France, and occasional cases have been reported in London. In Russia the disease has been recognized and acknowledged as true cholera. In France, however, for commercial reasons, every effort has been made to cover it up, and the term "cholerine" used to designate the disease. This term was not "coined for the occasion," as a learned cotemporary asserts, but is a word of doubtful authority, vaguely used to designate both the supposed cause of cholera and also *light cases that occur during an epidemic of cholera*. Its use in France at this time is simply an attempt to attach a new meaning to an old word.

The commercial relations between France, England and the United States are so intimate that it can only be by the utmost vigilance of the authorities, the best public sanitary measures, and the most scrupulous personal hygiene that we may escape an epidemic, either during this year or next year, when travel will be so greatly increased.

AN EXPLANATION OF THE INDIGESTIBILITY OF CERTAIN ARTICLES.

THAT there are certain articles of food which are indigestible mainly on account of chemical incompatibility with the fluids of digestion, must be accepted as true. However, a very much larger number of articles are indigestible mainly because they are tough, rather than either soft or friable, and hence are not well adapted to the requirement of being masticated to a pulp before being swallowed. Let us consider a few examples, which may be taken as sufficient to illustrate the entire class.

An egg is indigestible if boiled until the albumen is solidly coagulated. It is quite easy of digestion if eaten raw, soft boiled, or boiled several hours until it becomes mealy. The ordinary hard boiled egg is usually swallowed in lumps which expose but little of their surface to the action of the gastric juice. Hence, its digestion is very slow, indeed.

Mashed potatoes, or old potatoes which boil mealy are easy of digestion; while new potatoes, which are almost invariably swallowed in chunks, have a bad reputation. So, also fried potatoes, in which the potato is well protected by a coating of grease, bid defiance to the digestive fluids; while mashed potatoes and gravy or butter give no especial trouble.

Other articles that may be mentioned are, green cucumbers, green corn, water melon preserves, cheese, "sad" bread, cake or dumplings, pie-crust (especially the well-soaked under-crust), and many others. Gladstone is reported to have said that he gives each mouthful of food thirty-two bites in masticating. Our own rule is to continue chewing a mouthful of food as long as it gives pleasure to the taste. At any rate, it may be laid down as a rule, that very seldom will food prove indigestible, if the one who eats it is thoroughly conscientious in reducing every bit of it to a fine pulp before swallowing it. Our reply to patients, when asked what food is allowed, is generally, "Anything, in reasonable quantity, that you will chew thoroughly," having due regard, of course, to special diseased conditions and circumstances.

Following the principles outlined above, persons of no more than the average digestive power may safely indulge in a meal composed of the indigestible articles mentioned herein.

TO STUDY THE BEST METHODS OF ROAD IMPROVEMENT.

A MEMORIAL has been presented to Congress by Albert A. Pope, of Boston, Mass., requesting that a comprehensive exhibit be made at the World's Fair in Chicago on the subject of "Roads, their Construction and Maintenance."

The importance of this cannot be overestimated. From among the hundreds of earnest expressions made publicly upon the subject by Senators, Congressmen, Governors, military officers, farmers' organizations, the public press, etc., we select the following:

"*Honorable William A. Peffer, Senator from Kansas:*

"I have your favor of the 24th ult., and have barely time, in the midst of other pressing duties, to wish you and your coadjutors every possible success in the laudable work which you have undertaken of improving the public roads. I have often thought that the people, speaking of them generally, have never yet understood the value of good roads. They are not only matters of convenience, but they are really matters of great economy in every community.

"The farmer with one team of two horses is able to move on a good road more than he could move with four horses and a wagon of much greater strength on a poor road. This I have tested personally many times. Farmers are constantly in need of the use of highways to transport their property, and to move themselves from place to place. The average farmer is five miles distant from the nearest railway station, and his surplus produce must be moved that distance year after year. If he were to compute the saving that he and his neighbors would have by reason of first-class roadways, they would discover that it would amount to more than the expense of putting the roads in good condition and keeping them so.

"Our road system is miserably deficient. We could learn from the Romans and Germans in this respect very much. I am pleased particularly that you propose to present the subject of road-making in some tangible form before the people at the World's Exposition. Nothing, perhaps, would be better suited to call public attention to the importance of the matter than a movement of that kind. There will be a great many visitors from different parts of the country and of the world, who will be able leisurely to study the subject from drawings and practical suggestions in the way of machinery and in conversations with persons who have given thought to the subject, and in many other ways will be able to gather data to carry home with them to apply in practice. Wishing you abundant success . . . . "

"*Hon. James H. Kyle, Senator from South Dakota:*

"Yours of the 26th, relating to the proposed exhibit of improved roads, just received. I wish to say that I heartily approve and endorse the undertaking, as the subject of good roads is one about which the American people, though well advanced in civilization, are wofully ignorant.

"In the old Roman days all roads led to Rome, and they were good roads. They built roads for military and commercial purposes, and the wisdom of their enterprise was apparent even in that early day. European nations today regard road making as one of their eco-

nomic questions, and it does seem that our government, in its honest endeavor to benefit the agricultural classes, should have thought of good roads long ago. We want and must have splendid highways, owned not by corporations but by the people. They will be an economical investment and an untold comfort to the traveler."

Now, who needs and appreciates good roads more than the practising physician? Let every reader of this journal write to his Representative in Congress for a copy of the memorial, and get as many signatures to it as possible, returning it with urgent request that the Representative vote for the measure.

TAMMANY HALL AND THE NEW YORK BOARD OF HEALTH.

RECENTLY, the general public, as well as the profession, have been informed that the hand of the politician was being felt in the New York Board of Health; that competent, experienced medical officers had been summarily removed without cause or pretext; that in consequence of this high-handed, reprehensible course, Prof. Janeway had resigned as a member of the Advisory Board, and resigned also his professorship in Bellevue Hospital Medical College and as visiting physician to Bellevue Hospital. Since he resigned, Drs. T. Mitchell Pruden, Joseph O'Dwyer, R. H. Derby, Dan'l Stimpson and Abram Jacobi have also handed in their resignations, Dr. George F. Shrady alone remaining.

Under these circumstances, the profession throughout the land have been watching and waiting to see what those medical editors there, on the ground, have to say with regard to the matter; but we have heard practically nothing from them, yet, in the way of comment on what should concern every physician in this country.

Now, why this silence on the part of the New York City medical journals?

Is it because of intimidation or the fear of the crushing power of Tammany Hall? or is it because they have found that the course recently pursued by the Health Commissioners is in no way out of the usual routine adopted by any political party when in the ascendancy?

In order to correctly inform ourselves, we have sought information in the matter from reliable sources, which in abstract is as follows:

It doesn't appear that Dr. Janeway should have been suddenly oppressed by qualms of conscience because the political organization designated Tammany Hall removed him. It is an old saying that it is not gratitude "to damn the bridge that safely carries you over," nor "to kick the ladder away over the rounds of which you have climbed to professional fame and wealth." The Bellevue Hospital and the college connected with it, with the exception of a very short time, have both been under the control of the same political party, as the Board of Health and the same college and hospital now are for more than twenty years. In these Dr. Janeway trained, and it was made possible for him, through the facilities which they offered, to push himself upward into the very front rank of his profession. He was appointed Health Commissioner under a Tammany Mayor, and took in something like twenty-five thousand (25,000) dollars for five years' service. In the end he was indicted by the Grand Jury of New York, with his confrères, for permitting the maintainance of a nuisance.

Dr. Ewing, the displaced Sanitary Superintendent, about whom all the trouble came, was receiving a salary of forty-eight hundred (4,800) dollars, and, while in office, kept up, without assistance, a large general practice, was surgeon to the Broadway Railroad, and examiner for an insurance company.

His resignation was peremptorily demanded, President Wilson, of the Board, alleging that he neglected his official duties.

Dr. Ewing had been an inspector in the Board of Health for seventeen years, though he had no connection with it for five years before he was made Sanitary Superintendent. It is said that there were

charges against him when he was permitted to resign. Dr. Ewing was succeeded by Dr. Cyrus Edson, a well known active sanitarian, who, for several years, since his connection with the Board of Health, confined himself solely to his official duties in the Board.

Dr. John T. Nagle, the veteran statistician, who has done duty in the Health Board more than twenty years, was promoted to the position of "Registrar of Vital Statistics," which, as a matter of seniority, he should have had years ago. Dr. C. F. Roberts, being known as assistant of Prof. Austin Flint, of Bellevue, and for twenty years continuously on the Health Board, succeeds Dr. Edson.

So much for the active staff; now for the "Advisory Board," the most of whom have lately resigned. It is charged, by officers high in authority in the Health Department, that, with one or two exceptions, the members of it, since its creation, in 1887, have never troubled themselves about visiting a single one of the many institutions and hospitals in the Health Department.

The erudite and witty editor of the *N. Y. Medical Record* alone held on. Why? Well, Dr. Shrady knows a thing or two, and probably is one of those who can see no just cause for the awkward position which the Advisory Board have placed themselves in. Besides, he has a son, an inspector, in the Vaccination Bureau, which may incline him to the notion that, just now, "silence is the better part of valor."

This, then, is the sum and substance of the state of things which have transpired in the New York Health Board. Physicians as a body should wash their hands of ward politics; but, nevertheless, when a member of the profession is made the scapegoat of unprincipled politicians, the whole profession should rise in his defense.

But, in the present case, we can see no good ground for indignation, whatever way we may view the matter.

Annotation.

WE wish to call especial attention to the condensed report of the Michigan Board of Health. Its eminent Secretary, Dr. Baker, is doing a grand work, of which he, himself, the State of Michigan and the medical profession may well be proud. It can truthfully be stated that he is saving more lives and preventing more human suffering than any single practising physician can possibly do. The subject of an annual "Sanitary Day," analogous to the present Arbor Day, is an excellent proposal. We hope to see the day when the public protection of lives and health will be a prominent and sacredly cherished American institution.

Letters to the Editor.

A TRIBUTE TO A NOBLE WOMAN.

WE all, as citizens, whatever may be our line of life, have a worthy pride in our institutions of charity, State and private. In them we find represented what is best in our humanities, something that reaches deeper than the personally selfish to what is noblest in us. Without desire of invading the sacred precincts of the angel winged male and female shouters about woman's capacities, sphere and special aptitudes, we would venture to suggest that there are numerous places of *trust* for women as *specialists* and *experts*. Within near notice, close touch of our home doors, and in a grand field for humane and expert work, is Dr. Alice Bennett, who has had the management of the woman's department of the Norristown Insane Asylum since its erection, twelve years ago. This remarkable woman has placed the management of this institution upon a high plane. We doubt whether there exists an institution of the character in our own or any other country under more perfect management. It is a model in tasteful, orderly appointments, cleanliness, and that quiet which would not be expected in an institution for the insane. Dr. Alice Bennett's own personality, her considerate kindness and uniform courtesy and humanity give an atmosphere to the place. To make these stricken people seemingly happy under calamitous conditions requires, if not some stroke of special

genius, a heart alive with all human sympathies, careful study and a high order of vigilance. She has worked with *interest*, with *assiduity*, and a *woman's strong faith* to attain a practical thoroughness of management. One among the many things that profoundly impresses the visitor, is that the chief, almost the only, restraint is that of kindness. It would be interesting to know the full extent to which this kindness works cures. In the management there is resort to none of the weapons or agencies of brutal ignorance—none of those mechanical restraints which are typical more of barbarism than a Christianly human civilization. In the movements and intercourse of the inmates there is noticeable the graces, the practice of the social amenities of well ordered home life. Many of the first lessons of genteel society, sane breeding, could be learned there by those men and women who have set themselves apart as specially disqualified for doing any kind of useful work, and that other very large class so eminently endowed with the capacity of attending to everybody else's work, neglecting with scrupulous care that which lies close to their hands—important and of easy doing.

She studies each individual inmate as presenting a distinct problem for which there is to be evolved distinct treatment. She recognizes the possibility of improvement and often of absolute cure—has pursued a scientific course of management, has sought the aid of experts in diseases of the nervous system and also the sexual system, with the worthy aim of attaining the most successful methods of treatment. We write with no purpsse of discussing this most abstruse of all human problems. There has been much written upon insanity and its treatment of great practical use, much worse than useless. We desired to call attention to one of our new institutions and its management, in which our people have an interest and a pride. As to insanity as a distinct trouble, we will leave it to metaphysical and psychological specialists to discuss its origin. The strictly metaphysical points are without our sphere; the economic are those of State consideration. Scholarly men have given the subject laborious research, profound philosophical investigation, and there has been skilful use made of the results by the management of our asylums, but we are not yet down to the "primal granite" of the subject. Whatever the past has given us is only for our new and better moulding. The subject has ceased to be considered one simply of moral inquiry. The decision of its nature and causation will be shaped by those who make it a special study. The surgeon may in many cases reach the disease destroying mental and bodily powers, but he with his *one idea* will not satisfactorily answer the entire problem, though he may act an important part in its solution. It is a matter of high congratulation that the almost perfect management of the woman's department of the Norristown institution is that of a woman. The stimulus of the responsibility of such positions is the highest of educational influences, and women should push into these and kindred places of high trust wherever there is an open door.

Yours truly,

JOSEPH PRICE.

TWENTIETH AND HAMILTON STS., PHILADELPHIA.

THE following curiosity was received through the mail. I give it exactly as the original appeared:

DEAR SIR:—I have what the Dr here *pernunst acornatid ulcor* on one eye for over a year which bothers me verey much at times. it Dout be sore onely while the fever and enfermachin be in it. by using som medison once a Day & which I drop in the eye for a week the enfermashion leves. then the eye is all right for som time onely the white spick staes on the site which I can not see thrue onely verey littel. I have no money onely as I aren it by the mount Ples rite and let me know what you can Doo.

I remane respcfuley yours D. O'C.

"MISSOURI."

Book Notices.

KING'S ECLECTIC OBSTETRICS.—Revised, rewritten and enlarged by ROBERT C. WINTERMUTE, M. D., Professor of Obstetrics and Diseases of Women and Children in the Eclectic Medical Institute, Cincinnati, O. Ninth Edition, 8vo., Sheep, 750 pages. Price, $6.50, postpaid. Published by The Ohio Valley Co., 143 Race street, Cincinnati.

The preparation of this book was rendered necessary by the comparatively large class of practitioners of that distinctive or exclusive sect calling themselves eclectics. The general treatment of ob-

stetrical procedures is about that of our standard text-books on the subject. Wherein the book differs is mainly in the remedies administered wherever medicine is required. These are, of course, the remedies which eclecticism claims for its own—chiefly vegetable extracts from American fields and woods. In this regard the American eclectics should be accorded due credit—they have developed the uses of quite a number of American plants which constitute a permanent addition to the science of materia medica. Any conscientious student of obstetrics will find both interest and profit in the perusal of this book.

The Medical Digest.

TREATMENT OF DIPHTHERIA WITH ARSENITE OF COPPER.—Success in the treatment of diarrhœa and dysentery with arsenite of copper suggested the idea of its use in diphtheria, on the grounds that it was the alimentary system that was involved in both cases. The 1st of October, 1891, an epidemic of moderate severity made its appearance in this city, and lasted for several months. My cases, varying in age from one to ten years, were put upon the arsenite treatment, which was supplemented by small doses of calomel, when it was needed, on account of constipation. Inunction, with sulphate of quinine suspended in glycerine, was practised in all cases, usually repeated every four hours. How much quinine was absorbed I do not know, but the plan keeps the skin in good condition. Where there was much cough or hoarseness, equal parts of glycerine and any good wine were given with the arsenite. Or, if that was not agreeable, 1 per cent. of benzoic acid, combined with powdered sugar, was dropped on the tongue, and repeated as often as thought necessary. No local applications were made; the surroundings were looked after, and when (as happened in some of the cases) little food could be taken, an effort was made to induce them to take water freely, either plain or in the form of lemonade. None of these cases were malignant, none died, and none suffered from unpleasant sequelæ. Such a short experience in the treatment of such a disease ought not to count for much, but I feel certain that the plan will prove (to say the least) as successful as any, while its application will be much more agreeable to all concerned.—M. M. Latta, M.D., Goshen, Ind., in the *Indiana Med. Jour.*

NEW CONTRIBUTIONS TO THE PHYSIOLOGY OF THE HEART.—There appear to be some practical deductions of high importance which flow from the scientific researches of Dr. C. S. Roy and Mr. J. G. Adami, on the physiology of the mammalian heart. These gentlemen have made a long series of experiments on the organ in question, and have recently presented their results in abstract to the Royal Society. We cannot by any means recapitulate all the facts obtained by them, but will present some of the more important.

The heart usually sends out more blood when it beats slowly, and less when it beats rapidly. This law, if it be one, does not apply, however, to slowing of the heart from stimulation of the vagus nerve. Slowing from such cause is accompanied by a diminution of the output which may amount to one-third. Hence the vagus is a nerve which essentially protects and lightens the work of the heart. It stands in especially close relation with the brain, so that when that organ is flushed and congested, the vagus is stimulated and the output of blood lessened. The vagus has a strong inhibitory action on the veins and auricles, but it cannot, however strongly excited, entirely stop the action of the ventricles. In other words, one cannot kill by overstimulating the vagus and stopping the heart. Furthermore, Roy and Adami assert that the action of the vagus on the heart is not a weakening one.

Stimulation of the accelerator or augmenter nerves of the heart increases the output and the rapidity of the beat. In other words, they increase the work of the heart. They do this by increasing the force and frequency of the auricular contractions. It seems, therefore, that both the vagus and the augmenters act upon the heart through modifying the auricular contractions.

There are certain fibers running partly in the vagus which increase and others which decrease, the activity of the heart when stimulated, acting probably upon the coronary arteries. It is shown that the blood-pressure in these same arteries

is an important factor in modifying the activity of the heart, it being increased when they are dilated, and lessened when they are contracted.

It is shown also that the augmenter nerves have no effect on the heart except by inhibiting the vagus; and, conversely, the vagus cannot lessen the strength of the heart's contractions except by acting on the augmenters.

Another very important fact brought out is that a change of the volume of blood in the body affects greatly the contraction volume and output of the heart. Injections into the veins of a volume of defibrinated blood equal to one-tenth of the total blood in the body may double the output. It is important to note, however, that there is no increase in the strength of the ventricular contractions; increase in the work, therefore, of the ventricles due to increase in the output has no tendency to automatically increase the force of the ventricular contractions.

Increase of the watery constituents of the blood increases the contraction volume and output to the same extent (though only temporarily) as does transfusion of blood, but acts more unfavorably on the heart, seeing that the work done by the ventricles is increased, while the nutritive value of the blood supplied to the coronaries is diminished.

It would seem, therefore, that the injection of saline solutions in cases of great cardiac weakness has not a sound physiological basis.

It is shown finally that the change in the heart and circulation which takes place during asphyxia points to the conclusion that, when the total amount of oxygen in the blood is lowered, it is for the benefit of the economy that those organs, such as the central nervous system, whose continuous blood supply is a vital necessity, should be richly furnished with blood by constriction of the vessels of the spleen, kidney, and digestive system, whose blood-supply can be cut off temporarily without danger to life, and also that the heart should carry on the circulation in a manner involving as little waste as possible of its own substance. This it is the function of the vagus nerve to bring about.—*Medical Record.*

THE MARCH OF CHOLERA.—Asiatic cholera has traveled to Europe by three routes: It has passed through the Northwest Provinces of India into Afghanistan, and thence along the caravan routes by way of Balkh, Bokhara and Khiva; it has reached the Russian province of Orenberg; it has spread along the trade lines from Southern India to Persia, and radiated thence southwestward to Syria and Egypt, and northwestward across Persia to the Caspian Sea, thence to Astrakhan at the mouth of the Volga, and up that river to Saratov and Kasan in European Russia (as in 1830); finally, in 1865-66, it traveled by a new route, appearing first in Suez in relation with the pilgrim traffic, and extending thence through Egypt to the Mediterranean basin. Since 1865 the epidemic has always taken this route, and we have come to regard the Red Sea ports as the vulnerable point. Great precautions have been taken to deal with infected ships at the mouth of the Red Sea, and it seemed that the Concert of Europe had brought the dread epidemic under convention. Already, however, even before the final revision in Paris of the decision of the Sanitary Conference which met in Venice has received the official sanction of the Powers, events have occurred which prove that the Red Sea is not the only dangerous point, and that cholera will follow trade routes, whether by land or water. Cholera, this year, has followed the northernmost of the three routes from India, the route which it followed in 1829 and in 1843-44. Or, rather, it should be said that it has struck out a route which is partly new, but approaches most nearly to the northern route. The reason for the difference to be noted is not far to seek. The movements of trade in Central Asia have been profoundly modified by the building of the Transcaspian railway, which runs from Samarcand, touches the Persian frontier at Askabad, and strikes westward to the eastern shore of the Caspian. The trading route crosses the Caspian at Baku, which is the terminus of the Transcaucasian railway, which runs by way of Tiflis into Southern Russia. There is also a large coasting trade from Baku northward to Astrakhan, at the mouth of the Volga. Cholera has followed this route from Askabad on the Persian frontier to Saratov, which is 500 versts above the mouth of the Volga.

It reached Persia from Afghanistan, and penetrated the Russian frontier about the end of May or the beginning of April. The first Russian town attacked was As-

kabad, which, as already said, is a station on the Transcaspian Railway, and spread along the railway, both eastward and westward, with a rapidity which may fairly be called alarming, and is certainly unprecedented. It reached the eastern shore of the Caspian Sea in a few days, and was not arrested by this natural boundary. Following the ordinary course of trade, it soon made its appearance on the western shore of this great inland lake; Baku, the petroleum port, was the first place infected, and a large number of deaths have occurred there. Extraordinary efforts were made by the Russian officials by quarantine regulations of a very strict kind, which involved the complete arrest of all trade, to keep the epidemic limited to Baku and its immediate neighborhood. When we wrote last week, it was hoped that this had been accomplished; but the official news of this week shows that this hope has been disappointed, and that quarantine has once more shown itself to be merely "an elabrate example of leakiness."

From Baku the epidemic has spread in three directions: south to Shusha near the Turkish frontier; north along the line of coasting traffic to the mouth of the Volga, and westward to Tiflis, which is on the Transcaspian railway. It has been keenly apprehended that if the epidemic once became established at Astrakhan, at the mouth of the Volga, it would quickiy gain a foothold in some of the provinces which have suffered most from the famine. This apprehension has, it is to be feared, been realized, for it is now admitted officially that cholera has appeared in Saratov, the capital of the province of that name. Twenty-nine deaths occurred in the first four days of this month, and it is impossible not to feel that the presence of the epidemic among a population already decimated by famine and disease constitutes a very serious menace to Europe. It was reported on July 6 from St. Petersburg that cholera had appeared in the province of Kostroma, some 700 miles further up the Volga, and in the very center of Russia in Europe.

It is, of course, most desirable to avoid anything like panic, but it will not do for us to be caught napping. Very optimistic opinions have been telegraphed from Vienna, but while sympathizing with the motive of such utterances, we are not altogether prepared to endorse them. The progress of sanitation in this and other countries of Western Europe has done very much to remove the faulty social conditions under which cholera is known to flourish; but our immunity is only to be secured at the price of constant vigilance. Dr. Proust has truly observed, in a recent report to the Comité Consultatif d'Hygiène de France, that if the infection spreads to the Black Sea, there is every prospect of the epidemic following the lines of the visitations of 1831 and 1847; that is to say, either northward through Austria and Germany, or directly eastward through Northern Turkey and the Danubian principalities. In 1848, 1853, and 1866 cholera reached Great Britian from northern ports—Hamburg and Rotterdam.

There is no doubt that there has been a considerable prevalence of cholera in India this year, and that it has in fact become distinctly epidemic there. It will be remembered that special steps were taken to prevent the Hurdwâr fair becoming a focus of disease, but the disease has been severe at Peshawar and in Kashmir. A valued correspondent, writing from Srinagar under date June 11, informs us that the epidemic there began on May 6, and that there had been over 8,000 cases and 5,000 deaths in Srinagar alone out of a population of 124,000, and at least 1,500 deaths in the district. It is hoped that the worst is now over, the new cases on June 10 having been 121, as against 171 on June 9, and 236 on June 8. On May 23 there were 499 new cases, but the maximum of deaths was on May 25, when 298 patients succumbed. The officials of the Maharajah of Kashmar have done all that was possible to cope with the disease. They have had the invaluable assistance of Brigade-Surgeon Lieutenant-Colonel Robert Harvey, who volunteered for the perilous service, and was specially commissioned by the Government of India to proceed to Srinagar. Medical advice, according to the European or Yunani methods, has been within reach of all, with a plentiful supply of medicines and disinfectants. A house to house visitation has been instituted, and every case reported is at once attended to. A cholera hospital has been provided for strangers and paupers without homes or friends, and every effort is being made to improve sanitation. Srinagar is, however, one of the filthiest of cities, has neither drains nor latrines, nor

any real system of conservancy. Arrangements have already been made to introduce a pure and protected water supply. Advantage will be taken of the recent destructive fire to rebuild the burnt-out area on sanitary lines, and efforts are being made to introduce a proper system of conservancy.—*British Medical Journal.*

Asiatic Cholera.—We find the following practical address in the report of the Minnesota State Board of Health :

Asiatic cholera has begun another march across Asia and Europe, with a strong probability that if it reaches the western shore of Europe it will cross the Atlantic to this country, as it has done before. It comes in the persons or baggage of travelers, mostly immigrants, and enters through our sea-board ports, New York, Boston, Baltimore, Philadelphia and New Orleans, and through the St. Lawrence Canadian ports.

Cholera has its home in the delta of the Ganges, and is spread thence along the line of human travel, and probably by both the persons and baggage of its victims. It makes better time every year because of increased facilities of travel.

It will enter our country, if at all, at one of the sea-ports named, in the body, or baggage, of an immigrant, and it is therefore manifest that our best protection will be the surety and efficiency of the sea coast sanitary service. That of New Orleans is probably the best in location and efficiency ; next comes New York for equipment, but the service is hampered by the "Tammany Grip." If the Health Officer is let alone, the work will be well done. Boston is well managed ; of Baltimore, the writer knows little ; of Philadelphia, the work is divided between the Marine Hospital Service, at Delaware breakwater, and the State Quarantine Service near Philadelphia, and in co-operation with the State Board of Health. Portland is not a port of entry in warm weather. There remains the St. Lawrence Quarantine Service of the Dominion Government, which is now building a steam disinfecting plant, and which has arrangements for disinfecting by chemicals and steam the hospitals of infected ships. No notification has yet been arranged with Canada, though the Medical Superintendent favors it. The writer has visited and examined all these stations except New Orleans and Baltimore, is acquainted with the medical officers and their methods, and also with some of their difficulties. Then comes the Immigrant Service of the United States, which take the immigrant after he has passed the State Sanitary examination, and deals with him under the immigration laws which were not intended originally to look out for infectious diseases except incidentally. At the solicitation of the writer, it undertook the notification of immigrants suspect of infectious diseases to the State Boards of Health, deriving its information, usually, from the State Health Officers of the various ports. The position of the Marine Hospital Service, as respects immigrants, is not settled, except as it has charge of certain quarantine stations outside the State limits on the sea-board, and co-operates with State, as it did with this Board, in securing sea-board notification.

But if cholera escapes the sea-coast sanitary barriers, what then? It will be impossible to deal with it by the same methods, because its victims will be scattered so widely that to trace individuals will be an impossibility, or to follow a ship's load whose intended destination is known. This leads to another fact about the disease. The microbe must find suitable soil and moisture, and it does so in the earth, water, air or other things fouled by decaying vegetable or animal matter. In pure air, soil, or water, it establishes itself living with difficulty, or, if at all, feebly, and dies early. Our best home protection against cholera is thorough and constant cleanliness, personal, family, and municipal. If these are reasonably and steadily maintained, cholera cannot become epidemic, and if it come, will be easily crushed out. The directions in the circulars of the State Board of Health on "Sanitary Inspection of Cities, Villages and Towns," and "Domestic Hygiene," with enforcement of existing laws against nuisance and offensive trades, will secure our reasonable safety and prevent all danger of epidemic prevalence.

But if cholera does come, what then? Avoid senseless panic, isolate the case under the direction of the Local Board of Health, and make sure that all discharges are instantly disinfected ; watch for any case of diarrhœa, which should be properly cared for with the same disinfection as for cholera. It is a curious fact that while the mortality from cholera infantum averages more than one thousand victims

every year in Minnesota who are under five years of age, and that twenty-two per cent. of all deaths under that age are from this cause, there is not only no popular alarm, but it is, so far, impossible to secure any popular co-operation to diminish or prevent the slaughter. If we did our best to prevent cholera infantum, there would be little danger of Asiatic cholera, which, if it came as epidemic, would not be likely to kill one thousand victims, as the diarrhœa of children does every year.

A Case of Leopard Bite.[1]—A cooly, aged thirty, was brought to hospital on the evening of November 14. He was reported to have been bitten the previous day by a leopard, which seized him three times by the arm above the elbow; all the wounds were above the elbow, except one large laceration on the posterior aspect of the forearm. This latter was the only extensive wound, and was situated two inches below the elbow-joint, circular in shape, with a diameter of two inches, and showing the lacerated muscles in its center, the circumference being irregular. It penetrated to the ulna, but did not communicate with the joint. There were twenty-five small punctured wounds on the posterior and lateral aspects of the arm, with an average depth of about one-half inch, but no laceration. On admission, patient was in a very restless condition, gathering himself up in a knot on the bed, and then rolling from side to side. There was twitching of the muscles of both arms. He paid little attention to questions asked him, and his answers had no bearing upon the point. His pupils were contracted to pin-hole size, with marked photophobia; pulse rapid and small; urine passed unconsciously. The temperature in the axilla was 104.8° F. The wounds were irrigated with corrosive sublimate lotion (1 in 2,000), and dressed with iodoform; and, internally, stimulating mixtures were given. Alcohol he would not take, on account of his caste. On the following day the patient was delirious, the pulse at the wrist imperceptible, and the brachial scarcely to be felt; defecation and micturation were involuntary. He was given chloral, gr. xxx, by mouth; ether, ♏x, hypodermically, and a nutrient enema of brandy, ℥ij, with egg. On November 16, he was conscious and much improved. On the fourth day after admission, all the tissues surrounding the small punctured wounds began to slough, and continued to do so until the humerus was exposed in its outer and lower third, while channels were left through from side to side by which the wounds on the inner side communicated freely with the wounds on the outer aspect.

The constitutional symptoms at this stage became so severe, with exacerbations and night sweating, and the sloughing so progressive, that amputation at the shoulder-joint seemed the only alternative left. The wounds were washed out twice a day with corrosive sublimate lotion, and iodoform with antiseptic lint stuffed into the wounds twice a day, and nutrient enemata continued. Suddenly the unhealthy nature of the tissues changed, and the excessively fetid odor stopped. Thence onward healing went on without interruption, the arm contracting considerably at its lower third, on account of the loss of tissue.

This case is given as an instance of the degree of shock that usually takes place about twenty-four hours after tiger and leopard bites, and heralds the onset of the pyæmic condition. That death in the case of tiger wounds is not unusual from shock about twenty-four hours after is a generally-accepted idea, even though the extent of mauling be comparatively slight.—Simpson, *Brit. Med. Jour.*

A New Treatment for Cancerous Affections.[1]—"There is no new thing under the sun," and it is highly probable, that what is here styled as "a new treatment" has been long ago employed by the herb doctor of revolutionary days, even though the profession has not hitherto been made acquainted with its curative power in cancerous affections. If there is one thing which causes a feeling of surprise, mingled no less with indignation, to the young physician just embarking in the practice of his profession, it is the readiness with which he sees certain chronic ulcerations yielding to the "old women's remedies," after he himself may have ex-

[1] Read before the South Indian Branch of the British Medical Association.

[1] On account of its exceedingly great value and importance we reproduce Dr. Carpenter's paper in full as originally published in the *Lehigh Valley Medical Magazine*.—Ed.

hausted the pharmacopœia in his useless attempts towards effecting a cure; and very often he indulges in reflections highly uncomplimentary to the professional teachings he has received, instead of seeking out the real truth to be obtained from a closer study of nature's remedies so near at hand. He still finds it impossible to ascribe the same properties to the highly cut "gem" of the chemist's laboratory, and to the despised and dirty weed, which he himself has trodden under foot, many a time, in his communings with this same nature, especially so, when this knowledge comes from such homely sources, and through channels of such unscientific character, that to entertain it for a moment would be at variance with all that he deems most sacred in that profession of faith upon which he has just entered. But, as he learns later on in his professional career, there are many sources of knowledge outside the books from which he may draw important lessons, and many a fact based upon clinical teaching is of greater importance to suffering humanity than all the theory he can receive fresh from the lips of the most highly cultured teachers of the schools. Therefore it is, that, realizing what has been accomplished in this one case to be reported by me, albeit it has been obtained in a manner at variance with the most approved scientific methods of to-day, I have deemed it of such importance as to bring it to your notice in this afternoon's paper, hoping thereby that these remedies may receive a wider application, and their employment in these affections be given a satisfactory test.

Case.—Mrs. F. was operated upon in June last for a sarcomatous affection of the right breast, and the entire mammary gland was removed, together with several enlarged glands of the axillary region. Microscopic examination of the growth was made and determined its malignant character. Some months subsequently she noticed a number of small, round tumors on the outer aspect of the right arm, which increased in size and finally coalesced, making a large bulky growth, extending from the olecranon to within an inch of the shoulder, and widening to an extent of three inches. The skin became adherent over the mass, which itself adhered to the underlying tissues, the color of the integument taking on a deep purplish hue. Œdema of the hand and arm ensued, and considerable pain was experienced, which radiated from the seat of the growth throughout the entire length of the forearm. From the history of the primary disease the malignant character of the new growth was very plainly to be inferred, aside from the undoubted evidences of malignancy which it presented, and the necessity of a shoulder joint amputation was discussed by the several surgeons summoned to the case. The patient was seen by the late Dr. D. Hayes Agnew in consultation, and immediate removal of the growth by the knife was advised by him as necessary. Prof. Henry Coe, of New York City, also was consulted in this case, and he likewise strongly advised operative interference; but as she had determined to undertake "a cancer cure," of which she had learned through a friend, she declined to submit to the knife. At this time, also, several glandular swellings appeared in the axilla, and two nodular growths made their appearance in the linear cicatrix, which testified to the thorough removal of the right mammary gland before spoken of. It is important to bear this fact in mind, because the malignant character of the growth on the arm had not been positively determined, the patient declining to permit the removal of anything for purposes of microscopic examination. The "cancer cure," which she had determined to try in her own case, was deemed of greater potency when there was no ulceration of the cutaneous surface, and she feared that even a partial removal of the growth might result in an open sore. But here was a recurrence of the primary disease just as we have had to observe it in similar cases of our own, the nature of which was undoubtedly malignant, and therefore the influence of the remedies upon the recurrent growths may surely be taken as indubitable evidence of its behavior in the face of a pronouncedly sarcomatous affection. The treatment was begun in November last, and within three weeks there was a manifest improvement. The œdema subsided, the pain disappeared, and next began an improvement in the growth itself, which slowly lessened in size. It was my fortune to see the patient only a few days ago, when visiting her sister-in-law in this city, and examine carefully the present condition of the right arm and mammary region. The cicatrix was perfectly clean and entirely

free from any infiltration, the nodules which had been present in this situation, as above stated, having entirely disappeared. There was still present some degree of thickening of the tissues at the seat of trouble in the right arm, but no external signs of any growth remained. Only after considerable examination could one discover a small rounded tumor, about the size of a filbert, which was all that remained of the mass that had nearly filled up the space between the elbow and shoulder of the right upper extremity. The glandular swellings in the axilla had also entirely disappeared, and the patient, since entering upon this treatment, had gained fifteen pounds in body weight! The treatment, as originally pursued, was too uncertain to be productive of the best results to the patient, since its method of administration did not insure a uniform strength of the infusions employed, and there was considerable danger from the toxic effects of one of the drugs, which, on one occasion, demanded active antidotal measures, pursued through almost an entire night, before the danger was eliminated. As finally arrived at and continued at the present time, the treatment was described to me as follows: The two drugs used are the pokeweed (Phytolacca decandra) and the yellow dock (Rumex crispus), fluid extracts of each being employed in the following proportions: One fluidounce of the extract of yellow dock was added to 9 of water; then 1 drachm of the extract of pokeweed was added to 20 drachms of water, and of this second mixture the patient added a quarter of a teaspoonful to the mixture containing the yellow-dock, the dose of which was 2 tablespoonfuls three times a day. In addition to the internal treatment, a salve was prepared from the fluid extracts, applications of which were made night and morning to the growth on the arm. The strength of the ointment was in accordance with the following formula:

℞.—Ext. pokeweed fl..... ..... ℥j.
Ext. yellow-dock..... ℥ij.
Ceræ flav..... ℥i.
Adipis benzoat..... ℥iij.
Ft. unguentum.

In cases of cancerous affections where there has been ulceration of the cutaneous surface, the pokeweed must be omitted from the ointment. The tolerance of the pokeweed is stated to be very different with different patients, but the incipient dose should not exceed two drops of the fluid extract, even that dose producing most unpleasant symptoms in susceptible persons. Coffee is said to be the best antidote in case the toxic effects of the drug are manifested, and one of the injunctions laid upon the person undertaking the treatment, is strict abstinence from that beverage during its continuance.

From the foregoing history we may, I think, draw the following conclusions, based upon clinical facts and personal observation:

A. This patient was operated upon originally for a sarcomatous growth, and the entire right breast removed.

B. Subsequent to the operation, and synchronous with a recurrence of the sarcomatous growth in the wound of operation, a number of growths appeared in the right arm, which, from all the evidence obtainable, and lacking only microscopical examination, were of a malignant character.

C. That subsequent to a certain course of treatment pursued by the patient, in defiance of the best surgical opinion attainable, there was a complete disappearance of the recurrent disease from the cicatrix, and an almost entire subsidence of the disease in the arm, which bids fair to be entirely cured by a continuance of the treatment described.

D. That, if the objection be made to the effect of these drugs upon the brachial growths, that positive evidence of their malignant character was wanting, we may assert, an equally curative effect was exerted upon the recurrent affection of the breast, about whose malignancy there is no dispute.

Should not these facts, then, lead to an employment of these remedies in the treatment of all cancerous affections, with the object of ascertaining their true value as remedies for this dread disease?

As to the literature of the drug phytolacca decandra, little can be found concerning its physiological action or clinical uses. In 1792, a pamphlet, "De Phytolacca," was published by J. W. F. Kühn, and three years later a botanico-medical dissertation was written on the same subject by B. Schultz, after which, until 1831, there was no further contribution to this subject, when Dubuc wrote a memoire entitled "Sur le Phytolacca decandra." What the nature of these treatises was, I

have had no opportunity to learn prior to my publication of this article, but it would be of decided interest to know, if in them has been made any reference to the uses of this drug in cancerous affections. The tincture of phytolacca has been recommended as highly efficacious in threatened mastitis, but I have never found it of especial service in preventing inflammation of the mammary gland.

It occurs to me to add, that, possibly, future clinical experiments may determine its value in combination with rumex crispus in scrofulous diseases, and if in them, why not equally so in that allied disease, tuberculosis? How great the irony of fate, if after all the years of laboratory searching for the germicide, which should prove potent enough to destroy the disease-bearing bacillus within our tissues, without endangering the patient's life in that supreme effort, the answer to the question be found in that despised and disregarded weed that grows in every field. Is the treasure less to be valued because long trodden under foot? Shall simple, direct remedies for disease be contemned as valueless because we have ever been anticipating some greater principle to be unfolded to our gaze? Shall we repeat with the Assyrian of old, "Are not Abana and Pharpar, rivers of Damascus, better than all the waters of Israel?" Or, shall we not accept the offer of a simpler faith, and wash in the despised "waters of Jordan" and be clean?

Broncho-Pneumonia of Intestinal Origin.—Five years ago Sevestre, from clinical observation alone, became convinced that broncho pneumonia in infancy was occasionally of intestinal origin, and concluded one of his papers in the following language:

"1. In children one or two years of age (and probably also of other ages), subjected to a vicious alimentation, there may occur a decomposition of the intestinal contents, resulting in a fetid diarrhœa and an infectious enteritis.

"2. General infection may follow, and particularly pulmonary congestion and broncho-pneumonia.

"3. Intestinal disinfectants, especially calomel and naphthaline, are the best means of relieving the diarrhœa, and of preventing pulmonary manifestations."

The work of his pupil, Lesage, we reviewed a few weeks ago. More recently, two others of his pupils, Gaston and Renard[1] have contributed the results of their work in the same field.

The chief characteristic of the trouble is the occurrence of the pulmonary disorder as a complication in the course of an existing diarrhœa. The cases usually occur in infants who have been badly fed. After more or less prolonged dyspepsia, diarrhœa sets in and is characterized by frequent stools, green, white, or yellowish, and very putrid. In from two to six days broncho-pneumonia appears, and is ushered in by more or less fever, by cough and dyspnœa. Very young infants lie quietly upon the back or side with the thighs flexed upon the abdomen. While in older children some interest in surroundings is manifested. Often the abdomen is distended with gas and is sensitive to palpation. Gurgling occurs in the right iliac region, and the skin is flaccid and non-elastic. The tongue is white, covered with a thick grayish coating in the center, and red on the edges. The stomach is dilated with gas, and the spleen is often perceptible on palpation. Fever, which is sometimes wanting, varies between 102 and 104, and is very variable. The cough varies a great deal, and the dyspnœa, not usually intense, is shown by respirations varying from 20 to 45 per minute. The physical signs show broncho-pneumonia, but vary greatly from day to day. The disease lasts usually from one to two weeks, but may be prolonged to two months.

The authors describe four forms of the trouble: The supra-acute or choleric form; the grave or typhoid form; the prolonged or remittent form; and the light or common form. The first form is rapid and terminates in two or three days, the patient dying in an algid stage. The typhoid form lasts two or three weeks, has a quite constant temperature and rather less diarrhœa. In the remittent form, which Sevestre has described very carefully, the temperature remains elevated for two or three days, and then drops for a like period, when it again rises. These exacerbations and remissions may occur for four or six weeks, and each exacerbation is accompanied by a new patch of broncho-pneumonia. The diagnosis is not usually difficult. The appearance of fever and cough in the course of a fetid diar-

[1] *Rev. Mens. des Mal. de l'enfance*, May, 1892.

rhœa, in a badly fed or bottle-fed baby under two years of age, should raise the suspicion of a broncho-pneumonia of intestinal origin. Generalized bronchitis gives less fever, and no diarrhœa. Frank pneumonia is relatively rare, and should be made out by the physical signs. Pneumonia complicating acute infectious diseases is readily differentiated by the accompanying conditions. Typhoid fever is difficult to distinguish; attention should be given to the rose spots, and in the authors' opinion, to the temperature curve. Tuberculous broncho-pneumonia it may be impossible to differentiate.

Some interesting pathological work on this subject has already been done. Lubarsch and Tsutsui, in a case of diarrhœa complicated with pneumonia, have found, in both the intestine and the lung, the bacillus enteridis of Goertner. Gilbert and Girode in a case of cholera nostras have found the bacillus coli communis, associated with other forms, during life. Chantemesse and Widal in six cases of typhoid fever have found the Eberth bacillus in broncho-pneumonia. Lesage, on the contrary, asserts that pulmonary lesions complicating enteritis are always due to the presence of the bacillus coli in the lungs.

The pathological observations of the authors were made upon twenty-six cases of broncho pneumonia with infectious diarrhœa. They made cultures from the stools and also from the pulmonary juice, which they obtained by punctures made into a pneumonic spot during life.

The stools, naturally, gave various forms; among them were observed the bacillus coli communis, bacillus subtilis, bacterium termo, bacillus enteritis of Goertner, and diplococci. Of the 26 broncho-pneumonias examined, 16 gave only a single species of micro-organism, 5 showed several species, and from 5 no cultures were obtained. Where pure cultures were obtained they were as follows:

Pneumococcus	8 times.
Staphylococcus	3 "
Bacillus coli	3 "
Encapsulated bacillus	2 "

The other five cases showed:

Pneumococcus and staphylococcus	3 times.
Staphylococcus and bacillus coli	1 time.
Pneumococcus and bacterium termo	1 "

From these observations the authors conclude:

1. That in the majority of cases, broncho-pneumonias occurring in the course of the infectious diarrhœas of infancy, are secondary, and are due to superadded micro-organism, and (in some cases only) are due to the specific agent of the infectious diarrhœa.

2. That in the majority of cases, the specific agent of the diarrhœa, favors by its secretions the virulence of the parasitic species normally contained in the buccal cavity, and renders them pathogenic.

From further experiments on lower animals, which space prevents our reviewing here, the authors hold, that the bacillus coli is capable of establishing a true septicæmia, which in the infant starts in the intestine, and is provoked by diarrhœa. The bacillus coli passes from the intestine to the lungs by way of the lymphatics and blood-vessels, and in this way produces the lesions of these organs.

In the lungs the ordinary lesions of broncho-pneumonia were found, and in other organs generally, congestions with tumefactions, or granulo-fatty degeneration of the cellular elements, such as are commonly met in acute septicæmias.

Such observations as the foregoing are very valuable, and exceedingly suggestive. They seem to open the way to a more rational handling of a certain class of broncho-pneumonias. If clinical experience counts for aught, it would seem that the pulmonary lesions of intestinal origin are not limited to pneumonia, but that acute bronchitis is not infrequently traceable to a similar origin.

This work is particularly interesting in connection with the subject of typhoid fever in infancy.

That typhoid fever occurs more frequently in infants than was formerly supposed is coming more and more to be admitted. When it does occur the bronchial symptoms are usually exaggerated, and pneumonia sometimes supervenes. While typhoid in the infant can not be recognized clinically in a given case unless the peculiar eruption has appeared, it would be going too far to say that the absence of the eruption proves the absence of typhoid.

The appearance of the tongue which authors have described, is exactly that found in typhoid fever in the infant, and their grave or typhoid form is highly suggestive of the so-called enteric fever. Again, the relation of the bacillus coli to

these cases furnishes food for conjecture, for Rodet and Rox still claim that the Eberth bacillus is but a modification of the bacillus coli.

—*Journal Amer. Med. Association.*

"A Class of Cases Found in the Office of Every Physician." — In looking back over my field of general practice, I see more cases of what the laity vaguely called "female diseases" than of any one class. What does this prevalent term signify? Is it some unknown and undetected condition, the source of which remains a mystery, or will a thorough examination in all these cases discover the cause of the manifested symptoms? I am sure there is always a source from which the symptoms presented by the cases eminate, and it can be detected by the educated finger in an examination, if thorough and systematic. Just here, let me state that the diagnosis made by the careful and painstaking general practitioner is in the majority of cases a correct one, yet the specialist should not fail to make, when called in consultation, a most thorough and careful examination, and his diligent attention should be given in every detail in making his deductions before giving his opinion or resorting to operative procedure.

A vaginal discharge, a backache, a metrorrhagia, amenorrhœa, dysmenorrhœa, an offensive discharge, painful defecation, frequent desire to urinate, etc., etc., should lead to an examination and a detection of its source, and the proper treatment of the case will at once suggest itself.

I can no better illustrate why I selected the title, "A Class of Cases Found in the Office of Every Physician," than by reciting a few cases seen by me in the last two or three weeks.

A lady of thirty-two years old called at my office Saturday; she had that peculiar sallow complexion seen often in chronic bone supuration due to a specie of chronic pus poisoning. Her gait was peculiar and almost characteristic of the condition I found her pelvic organs in, on examination. You will see these cases with a slightly stooping attitude, with a hand, if not observed, placed on the anterior superior spine of the ileum, with the finger tips just over the location of her diseased organs, this position is one assumed almost unconsciously to assist nature in her efforts to keep the structures quiet. Her steps were carefully directed lest she give herself pain by another jar. She is the mother of one child nine years old. This is the history of these cases generally as regards children, because a condition exists in the tubes and ovaries producing a sterility, and many of the cases have never borne a child. Her confinement was a slow, tedious one; the delivery an instrumental one, and her getting up very tardy and accompanied by an attack of what was called "inflammation of the bowels" (salpingitis and its companion pelvic peritonitis). Since the birth of this, her only child, she has had a number of similar attacks, lasting from a few days to as many weeks. Her menstrual periods are profuse and painful, lasting seven days. Walking gives her much pain; a ride over a rough road in a carriage is sure to cause much suffering. Sexual intercourse is very painful and always dreaded. Bowels are constipated, because she delays an action as long as possible to avoid the pain caused by the bowels moving.

She tires easily, and is unable half the time to attend to much of her household duties. On examining her I found this condition of affairs: Cervix large and torn on one side and pushed to the right of median line; uterus large and fixed and sensitive, and also to the right; on right side, the ovary enlarged and tender, the Fallopian tube much larger than natural; on left side I find the whole pelvis filled by a boggy-like mass extending from the vaginal vault, half way to a line drawn from one iliac crest to the other, very painful and fluctuating. What had I to deal with? What was the cause or origin of this condition? What is the proper treatment? What is the prognosis with or without an operation? To her delivery being an instrumental one and accompanied by a laceration of the cervix, may be ascribed the beginning of her trouble. The forceps were not sterilized, and an extension of the inflammatory disturbance set up in the cervix and uterus led to the tubal and ovarian disease. I had in this case a lacerated cervix, but to operate for the repair of this condition on a patient with a pelvis full of pus, or even a mild case of salpingitis, would be to increase her suffering and endanger her life's safety with no prospect of any good accruing from my tinkering.

To have applied iodine to the endometrium, or vaginal vault, would have done no more good than to have painted her shoe soles. Hot water in this condition does not promise a thing. An operation with the object in view of the removal of the diseased appendages is the only rational course to pursue. Without this intelligent surgery her life is each day endangered by procrastination. Who can say that she is not liable to a diffused septic peritonitis at any hour with this great pus collection in her pelvis? A little leakage is all that is necessary to inaugurate a fatal attack of peritonitis. I shall do, next week, a double salpingectomy, carrying out a thorough irrigation and drainage, and will relieve her of her suffering and restore her to health. Nothing else will do this.

Only a few days ago I examined a case in many respects presenting the same symptoms, but on examination did not reveal a like condition in her pelvis. I found a retroflexed and adherent uterus, with a slight enlargement of the tubes, and two very sensitive ovaries also bound down. This case presented an early history and local state of affairs, of the case just recited. It is now two years since she was confined, has a slight tear of cervix. It is a case to be relieved only by an operation. Pus will be found in each tube, but not in large quantities.

Another class of cases seen mostly in young girls from sixteen to twenty-five years of age is illustrated in the case I am going to give the history of now, also examined during the past week. Age twenty-two, whose chastity is above suspicion. I make this statement in the face of the fact that the majority of tubal and ovarian diseases are directly traceable to gonorrhœa, abortion, septic endometritis, or traumatic causes. Her menstruation is irregular; sometimes amenorrhœa has persisted for a number of months; she has a leucorrhœa, has presented these symptoms for three years. An examination revealed an irregular swelling on either side of the uterus, which I knew to be the Fallopian tubes filled with caseous tubercular matter. She has a tubercular salpingitis. In these cases an operation should be done early, and great care exercised lest the peritoneum be infected, or even general milliary tuberculosis be induced by the rapid liberation of the bacilli tuberculosis. This young lady, while this condition exists, is liable at any time to have an attack of acute general peritoneal pulmonary or milliary tuberculosis. No one will, I trust, doubt the propriety or advisability of an operation in this case.

We find in our offices another class of cases presenting many features in common with the severer diseases mentioned above, but an examination reveals an absence of grave tubal and ovarian disease, only a sensitiveness a little abnormal; now these cases should be handled gently and with care, lest our tinkering set up an aggravation of the existing disease and produce that which our efforts are directed to avert. This is a mild case of salpingitis and ovarian hyperemia, and any tinkering not of the mildest aseptic character is liable to produce a purulent salpingitis with occlusion of the tubes, attachment of tubes to ovary leading to ovarian abscess, leakage, and a local or general pelvic peritonitis. Treat these cases by hot water vaginal irrigations, with the patient in a recumbent posture, avoid making any intra-uterine applications; pessaries should not be tried as they do much harm and little good in these cases. Keep patients quiet during menstrual periods, recumbent if possible, regulate the bowels and avoid sexual excitement. General tonics as each special case demands.

Very few physicians present have not seen a case with this history; the woman comes to you to-day with a purulent discharge from the vagina, accompanied by pain and burning, you prescribe for her, or perchance make a specular examination of the cases and possibly (but you should not) introduce a sound. Your patient returns to her home, but sends for you in a few days. You now find her with a coated tongue, with a temperature of 101° F to 103° F and acute pelvic and abdominal pains, and a digital examination reveals much tenderness in region of tubes and ovaries. Thus the case is converted from a simple (?) gonorrhœa into a condition of much gravity. Even if your patient's life is spared from this acute attack of septic salpingitis (of specific origin) and localized pelvic peritonitis, there is left a diseased condition that will remain until relieved by an operation for the removal of the diseased masses.

She will have recurring attacks until relief is secured either by death or intelligent surgery. Many cases of puerperal peritonitis are, in fact, puerperal salpin-

gitis, and the day is fast approaching when surgery will rob the puerperal period of many of its victims. It is just as reasonable and as justifiable to remove these organs in acute septic conditions, if they are the foci of infection, as it is to amputate a gangrenous limb to save the life of the unfortunate sufferer.

It may seem a broad statement, but lives are being, and will in the future be, saved by the removal of the uterus and its appendages where they are producing systematic infection or peritonitis, yet little can be expected from this operation if a general peritonitis has developed.

Gentlemen, you have all, I am sure, seen these cases. I present you some specimens of each variety of this class of cases, save the case reported in which an operation is not warranted or justifiable. These cases are to be found in every quarter of the inhabitable globe.

The points I desire to call special attention to are:

1. The prevalence of this class of cases.
2. The similarity of the symptoms of cases in which a different pathological condition is found present at the examination and operation.
3. The necessity of a careful and painstaking examination of all these cases that a correct diagnosis be arrived at.
4. The avoidance of any course of local treatment liable to aggravate the existing condition even in mild cases.
5. The proper surgical procedure for the relief and cure of these cases.

—Cordier, *Kansas City Medical Record.*

TREATMENT OF CANCER.—Under this head Dr. G. Sims Woodhead, in the Morton lecture on the Etiology of Cancer, says: "From a careful microscopical investigation of many hundreds of cancers that have been submitted to me for examination, I am firmly of the opinion that many surgeons make the mistake of not removing sufficiently freely either the tissues in which a cancerous growth has made its appearance or the lymphatic glands associated with it. Quite recently Mr. Harold Stiles, of Edinburgh, has carried on an extensive and careful investigation into the question of how far the immediate tissues around the naked eye cancer of the breast are affected. His method is based on the effect which nitric acid has upon the tissues, causing the connective tissue to become clearly differentiated from the epithelium. From a careful study of sections so prepared, both by Mr. Stiles and myself, as well as from microscopic examination, I am convinced that the only safe rule to be observed in removing cancer of the breast is to remove not only the main mass of the gland, but all outlying portions of glandular tissue; so that if, on cutting away the margins of the tumor, treating with methylated spirit and nitric acid, and then with water, any opaque columns or fragments are to be seen still, I should consider that the removal had not been free enough. Of course, the part of the tumor that should be especially examined in such a case is that near the sternum, where, by reason of the shape of incision usually adopted, there is the greatest danger of fragments of the gland being left. —*Maryland Med. Journal.*

News and Miscellany.

THE next annual meeting of the New Jersey Sanitary Association will be held at Lakewood, in December.

A QUACK REMEDY IN COURT.—The proprietors of a certain nostrum called the Carbolic Smoke Ball offered, some time since, to pay over the sum of £100 to any person who should have contracted influenza after and in spite of the methodical employment of the sternutatory in question. One of the many gullible persons who must have found by an expensive experience that the influenza microbe is not to be frightened away by a sneeze, brought an action to recover the aforesaid sum, and the matter has been brought before the court on several occasions. We are at liberty to infer from the defense that the offer was never intended to do more than throw dust in the eyes of the British public, and as such it savors of a disreputable trick, which we are glad to see has been punished by the defendants being mulcted in the sum of £100 and costs, which latter must now amount to a considerable total. Moreover, Mr. Justice Hawkins peremptorily refused to stay execution with a view to appeal, and we imagine the proprietors of the so called remedy will now recognize the necessity of withdrawing their grandiloquent offer from the public gaze.

—*Med. Press and Circular.*

WEEKLY Report of Interments in Philadelphia, from July 9 to July 16, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess of lung	1		Fever, typhoid	6	2
" hip		1	Gangrene of foot	1	
" lumbar	1		Hemorrhage from lungs	1	
Alcoholism	3		Hernia	3	
Apoplexy	12		Homicide	1	
Asphyxia	1		Indigestion		1
Asthma	1		Inanition		22
Bright's disease	5		Influenza	1	
Burns and scalds	2		Inflam'n brain	3	10
Cancer	14		" bronchi		1
Casualties	11	2	" kidneys	2	1
Cerebro-spinal meningitis		1	" lungs	10	6
Congestion of the brain	2	12	" peritone'm	2	1
Congestion of the lungs	1	2	" s. & bowels	9	19
Carbuncle	1		" spine	2	
Cholera infantum		132	Intussusception	1	
" morbus	3		Jaundice	1	
Cirrhosis of the liver	3		Marasmus		32
Consumption of the lungs	31	8	Measles		2
Collapse of the lungs		1	Neuralgia of the heart	1	
Convulsions		26	Old age	10	
Croup		3	Paralysis	7	1
Cyanosis		4	Pyæmia	1	
Debility	8	5	Rheumatism	1	1
Diabetes	3		Scrofula		1
Diarrhœa		3	Septicæmia	2	
Diphtheria	1	20	Stone in bladder	1	
Disease of the heart	28	3	Shock from operation	1	1
" " liver	1		Stricture of the urethra	1	
Drowned	1	4	Suicide, hanging	3	
Dropsy	1	2	Syphilis		1
Dysentery	3	3	Tabes mesenterica		1
Effusion of the brain	1	1	Teething		2
Empyema		1	Tumor	1	1
Enlargement of the heart	1		Ulceration of the stomach	1	
Fistula	1		Uræmia	8	1
Fatty degeneration of the heart	1		Whooping-cough		9
Fever, scarlet		4	Total	223	354

OF THE FOREGOING THERE WERE:

Under 1 year	239	From 40 to 50	38
From 1 to 2	42	" 50 to 60	38
" 2 to 5	29	" 60 to 70	30
" 5 to 10	26	" 70 to 80	39
" 10 to 15	8	" 80 to 90	14
" 15 to 20	10	" 100 to 110	1
" 20 to 30	38		
" 30 to 40	25	Total	577

WARDS.		WARDS.		WARDS.	
First	41	Thirteenth	7	Twenty fifth	21
Second	15	Fourteenth	12	Twenty sixth	40
Third	13	Fifteenth	20	*Twenty se'h	41
Fourth	16	Sixteenth	8	†Twenty ei'th	30
Fifth	14	Seventeenth	8	Twenty ninth	19
Sixth	3	Eighteenth	21	Thirtieth	16
Seventh	20	Nineteenth	35	Thirty-first	19
Eighth	7	Twentieth	13	Thirty second	3
Ninth	5	Twenty first	11	Thirty-third	21
Tenth	15	Twenty second	16	Thirty fourth	19
Eleventh	2	Twenty third	13	Thirty fifth	5
Twelfth	13	Twenty fourth	15		
Total					577

*Includes deaths in Almshouse.
†Includes deaths in Municipal Hospital.

Nativity—United States, 467; foreign, 107; unknown, 8; people of color, 41; premature birth, 17; still born, 32.

Males, 305; females, 272; boys, 196; girls, 158.

The number of deaths, compared with corresponding week of 1891 and of last week, was as follows:

Week ending July 18, 1891, was 499.
Week ending July 9, 1892, was 470.

By order of the Board of Health,

MOSES VEALE,
Health Officer.

Attest:
J. V. P. TURNER,
Chief Registration Clerk.

DR. DANIEL STROCK, of Camden, N. J., has been promoted to the position of Surgeon of the Sixth Regiment, N. G., with the rank of Major, vice E. L. B. Godfrey, promoted Lieut.-Colonel and Medical Inspector.

WHITE cut flowers may be caused to assume different hues—pink, violet or green, by pouring certain aniline solutions into the water. The application does not interfere with either the plant's vitality or the fragrance of the blossoms. This process was discovered accidentally by a woman flower vender of Paris.

—*Western Druggist.*

AT a meeting of the Military Order of Surgeons of New Jersey, held at Sea Girt, July 14, the following officers were elected: President, Col. Franklin Gauntt, Burlington, N. J.; Vice-President, Major C. F. N. Myers, Paterson, N. J.; Secretary, Lieut.-Col. E. L. B. Godfrey, Camden, N. J.; Treasurer, Major H. C. H. Herold, Newark, N. J.

AMERICAN PUBLIC HEALTH ASSOCIATION.—THE UNITED STATES OF AMERICA.—THE DOMINION OF CANADA.—THE REPUBLIC OF MEXICO.—The twentieth annual meeting will be held at the City of Mexico, Tuesday, Wednesday, Thursday, and Friday, November 29, 30, and December 1, 2, 1892. We most heartily approve the objects and methods of this most useful Association. Public sanitation is a public blessing.

This meeting, held in that most picturesque and interesting country, styled the "Egypt of America," will be both pleasant and interesting.

We append a brief history and statement of the purposes of the Association:

The American Public Health Association was organized in 1872, by a few public-spirited men who foresaw the need of bringing together in one body the ablest sanitarians in the country, for the purpose of inaugurating measures for the restriction and prevention of contagious and infectious diseases, and for the diffusion of sanitary knowledge among the people. The growth of the Association and the work it has accomplished more than justify its existence. Its membership has been augmented from year to year until it now constitutes the largest and strongest sanitary body in the world, and embraces in territorial extent the

United States, the Dominion of Canada, and the Republic of Mexico. Under the impetus given by its work, state and local boards of health and sanitary associations have been organized, sanitary publications increased, and hygienic knowledge widely and extensively diffused. The Association has already published seventeen large and valuable volumes, increasing at the rate of one a year, and containing the papers, reports and discussions presented at the annual meetings. These volumes constitute in themselves a library upon sanitation; they are elegantly printed and bound, and are alone worth more to any person interested in hygiene than the cost of membership. Each member is entitled to the annual volume, delivered free of expense. In addition thereto, the Association has published a standard work ugon "Disinfection and Disinfectants," besides the Lomb Prize Essays, now so widely known to the American public.

Among its members may be found physicians, lawyers, ministers, civil and sanitary engineers, health officers, teachers, plumbers, merchants, etc., in fact, every profession and many of the industries are represented in its list of members. The only qualifications required for membership are a good moral character, an interest in hygiene, and the endorsement of two members of the Association. Cost of membership, five dollars a year.

We should like to see every reader of this journal a member of the Association.

For full information, address.

DR. IRVING A. WATSON,
Secretary,
CONCORD, N. H.

CHURCH OF ENGLAND TEMPERANCE SOCIETY.—For the sake of the reputation of the Church of England Temperance Society, no less than the interests of mankind, we are glad to be able to state that, at the last moment, the authorities of that Society changed their mind as to giving their countenance to a meeting, which had most unwisely been announced under their auspices, in order to set sorth the so called virtues of a notorious proprietary and secret cure for inebriety, incorrectly but commonly described as the gold cure. Bishop Barry had been captured as the chairman, but from information conveyed to him by Dr. Norman Kerr and other well known members of the medical profession, as to the large financial speculation involved in the booming of this secret combination of dangerous drugs (which is, we believe, now on the market for the modest sum of £150,000, for the benefit of its American financiers), Bishop Barry wisely resolved to have the meeting postponed *sine die*. We believe that analysis of this compound will be shortly presented before the Society for the Study of Inebriety. There was not, we are assured, discovered any trace of gold in it, but various potent and lethal drugs. The so-called cure is disapproved by respected American physicians, such as Dr. Nathan S. Davis, of Chicago; and the reputable American press is replete with exposures of its failures and exaggerated pretension. The most conspicuous of the alleged cured patients was a prominent member of the New York press, who wrote an article in glowing terms, describing his cure in the *North American Review* and in widely circulated American papers. Unhappily, this unfortunate gentleman, who has done so much to boom this delusion, is announced as having died recently, and within a short time after the publication of his fervid articles, in a pauper workhouse. This attractively named secret remedy has many rivals, but none have been so effectively advertised. The uncured "cured" are to be found in the inebriate retreats of the United States, but still the delusions fostered by the temporary effects of the so-called gold cure find, from time to time, new apostles. It would, however, have ill become a serious society, such as the Church of England Temperance Society, or a respectable prelate, to have given their support to any such operations as that which is contemplated in this country by the syndicate in charge of the "cure." These secret remedies have their little day, and meet with ready and fatuous credulity from a public always ready to be seduced by extravagant pretensions and loud protestations. But, strangely enough—for some chance might well have directed it otherwise—there is no example in the whole history of mankind, so far as we know, in which any secret remedy has ever been found to be of permanent value, except to its inventors and vendors. The "gold cure" is not likely to have a very different history from the many which have preceded it, and from those which still hold the field against it.—*British Medical Journal.*

The Times and Register.

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PAGE

ORIGINAL ARTICLES:

THE BEDFORD CURE. By Wm. F. Waugh, A.M., M.D. - 133
MEDICO-LEGAL TESTIMONY, ETC., ETC. By Thomas H. Manley, M.D. - - - - - - - - - - - - - - - 135
OPIUM POISONING—BELLADONNA AND COFFEE AS ANTIDOTES. By Samuel Wolfe, M.D. - - - - - - 136
GALVANISM IN ATROPHY OF THE TESTICLES. By Ernest B. Sangree, A.M., M.D. - - - - - - - - 137

EDITORIAL:

A SPECIAL NUMBER ON TYPHOID FEVER - - - - 138
THE USE OF TITLES JUSTIFIABLE AND COMMENDABLE. *J. J. T.* - - - - - - - - - - - - - - - 138
CHOLERA NEWS - - - - - - - - - - - - - - - - 138

BOOK NOTICE:

The American Therapist. *Aulde* - - - - - - - - 140
Diseases of the Throat. *Bosworth* - - - - - - - 140
A New Pronouncing Dictionary of Medicine. *Keating and Hamilton* - - - - - - - - - - - - 140
Table Talk - - - - - - - - - - - - - - - - - 140

THE MEDICAL DIGEST:

Ought Infants to be Washed Immediately After Birth? (*Medical News*)—Apparent Death in Cholera (*The Lancet*)—The Cholera in Kashmir (*The Lancet*)—Medical Practitioners and the General Election (*The Lancet*)—Barbaric Brazil (*Fair Play*)—Vaseline an Undesirable Lubricator (*Novotmy*)—Bromoform for Whooping Cough (*Duncan*)—Surgery Under Hypnotic Suggestion (*Howard*)—The Wild Bilberry in Renal Disorders (*Medical Press and Circular*)—Debit and Credit in the Economy of the Nervous System (*Grashey*)—An Electrical Novelty. Natural Electricty and Physiology (*Quarrie*)—The Prevention of Mural Abscesses. Sinuses, and Ventral Herniæ After Laparotomy (*Hanks*)—Important Facts in the Theory of Inflammation (*The Lancet*)—Formulæ: Hair Tonic (*Falk*), Difficult Digestion (*Ib.*), Vomiting of Pregnancy (*Fry*), Constipation Due to Torpor of Liver and Bowels (*Robinson*) - - - - - - - - - - - - - - 137, 140–155

PAGE

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—Employment of Solanine in Affections of the Stomach with Neuralgia (*Desnas*)—For Writing on Glass (*Journal des Invent.*)—Lycopodium in Continence of Urine—Paracresotate of Soda—A New Antiseptic for Internal Use (*Le Progress Med.*)—Treatment for Hyperidrosis, Especially of the Feet (Sweating Feet) (*Brocq*)—A Means of Resuscitation of the Apparently Drowned (*Labord*)—Abortive Treatment of Erysipelas of the Face by "Sublimated" Ether Spray (*Talamon*)—Clinical and Bacteriological Researches on the Mud Deposited in the "Chamberland" Filter (*Lacour*) Congenital Imperforation of the Uterus (*Desormeaux*) - - - - - - - - - - - - - - - - 155–157

MEDICAL NEWS AND MISCELLANY - - - - 157
ARMY, NAVY, AND MARINE HOSPITAL SERVICE - - - - - - - - - - - - - - - - - - 158
NOTES AND ITEMS - - - - - - - - - - - - iv, ix

Original Articles.

THE BEDFORD CURE.

By WM. F. WAUGH, A.M., M.D.

MANY thousands resort yearly to Carlsbad, to find in the Bohemian mountains a renewal of the vital force, a remedy for the bodily ills. The efficacy of the treatment there is undoubted, attested as it is by the experience of centuries. But while this beneficial action is largely due to the water, the hygienic rules enforced at Carlsbad have much to do with it. Lauder Brunton says: "The Carlsbad waters contain a number of salts which are not crystallized out, and they often prove much more efficient when drunk at the springs than when the solution of the salts is taken by patients at their own homes. The great benefit which is often obtained from a course of the waters at Carlsbad is no doubt due, in great measure, to the diet and regimen which patients will follow there in company with others, but which nothing will induce them to conform to while at home."

To illustrate the necessity of advice, even as to the proper way to drink a glass of water, I will quote from the great English therapeutist, Lauder Brunton: "The secretion of bile is not only increased, but the pressure under which it is secreted is raised by sipping fluids. This is, in all probability, due to nervous influence, for it has been shown by Kronecker that taking a liquid in numerous small sips will for the time completely abolish the inhibitory action of the vagus on ths heart. It is probably in consequence of this fact that Carlsbad water, when taken in numerous sips for an hour or more, as at Carlsbad itself, is so exceedingly efficacious in hepatic diseases, while sodium sulphate, which is the main constituent of the water, was found by Rutherford to have but a very slight action as a stimulant to the liver."

How much benefit would accrue from the use of Carlsbad water were patients to eat what they please, drink the water as they please, or on the advice of some friend who knows absolutely nothing of the patient's ailment or of the action of the water? Let people go on the "go-as-you-please" plan, and the result would certainly be that while some would be benefited, the majority would go away no better than when they came, and some would be injured.

For it may be set down as certain that no medicine capable of doing good in suitable cases can fail to do harm in unsuitable cases. But this preposterous method is precisely that which has been in vogue at Bedford. Some of the visitors consult the physicians, but many more do just as they like, with the inevitable result. For this reason Bedford, endowed by Nature more richly than Carlsbad, is neglected by our citizens who flock to Carlsbad in search of the health they could more easily find at their own doors. It speaks volumes for the value of the Bedford water that, in spite of all the disadvantages under which it has existed, the popularity of the spring has continued, and visitors return to it year after year. Under the present management, a revolution has been inaugurated here. Visitors in the old days find the accommodations improved greatly in all respects. During the present season, for the first time, a resident physician has been provided, in the person of the writer. The action of the various waters is being studied, and their uses in various affections reduced to a system. The properties of the various springs differ so widely that the writer is amazed to find the same person taking *all* of these powerful remedies at one time! Surely, no one can possibly need a calcic-magnesian water, a strongly sulphuretted water and a chalybeate, at one and the same time. The hygienic regulations in force at Carlsbad are made the basis of the system being elaborated at Bedford, with such modifications as are rendered necessary by the differences in the nature and habits of the people. The Carlsbad course is admirably adapted to the phlegmatic, beer drinking German, or the Englishman, gouty with gorging on rare beef and port wine. Americans are more abstemious and more nervous, as a race, and require different regimen. And as there is no typical American as yet, but many different types, no system can be prescribed that will fit all cases alike, as with people in which the racial peculiarities are strongly marked. The regimen that will suit one German, or Englishman, or Frenchman, will be applicable to a very large percentage of his compatriots; but out of one hundred Americans selected at random, it is questionable if any ten should be put on exactly the same rules. During the fashionable season it is not possible to follow the new system, except as visitors may wish to do so. It has been proposed, however, to keep the Springs open during the remainder of the year, for the benefit of those who desire to come for motives of health alone. If this be done, patients may look upon it as a sanatorium, in which they are expected to drink the waters under the direction of the physician, and adopt the diet, exercise, clothing, hours for retiring and rising, that are best calculated to restore them to health.

But it must not be thought that the stay in the sanatorium is to be made irksome by vexatious restrictions. Such rules will be enforced as are conducive to health, and as returning health makes enjoyment possible, recreation must be provided.

Where, on the face of this earth, could a more perfect residence for gouty, plethoric, over-fat, or full-blooded men be found than Bedford in the hunting season, when game of every description, including deer, wild turkeys, pheasants, woodcock, quail, foxes, fox-squirrels, gray squirrels and rabbits, abound within easy reach? The waters may then be supplemented by the pleasant exercise of the sportsman, while for those who prefer fishing, the trout, pike and bass are plentiful. The salmon with which the streams were stocked are now four years old. In winter the sleighing often lasts six weeks at a stretch, and the lake offers boating or skating in the proper seasons. Those who need rest and quiet will have it, but those who require active, physical exercise are as well supplied as in any other locality. The resources of the valley will be developed. The hotel grounds contain nearly one hundred springs, and it is possible that some of these contain valuable components not as yet known. The sulphur and chalybeate waters can be employed as baths with great advantage, and massage, electricity and physi-

cal culture employed in appropriate cases. With these and other adjuncts, it is believed that the "Bedford cure" may be brought to such perfection as will render the trip to Vichy or Carlsbad unnecessary. Nature has done her part in richly endowing this valley. It remains for us to utilize her gifts intelligently.

MEDICO-LEGAL TESTIMONY, ETC., ETC.

By THOMAS H. MANLEY, M.D.,
NEW YORK.

UNDER the above title, an article is printed in THE TIMES AND REGISTER, for July 9, by Dr. S. V. Clevenger, of Chicago, in which he speaks in a disparaging and contemptuous manner of the extensive and valuable work of one of America's most celebrated surgeons, that, it seems to me, those in our profession acquainted with the many and highly scientific contributions of his on this subject should not permit, anyone to condemn him, by inuendo, without substantial and unanswerable reasons.

What Nicholas Senn was in the way of revolutionizing the surgery of the alimentary canal, from the stomach to the rectum, B. A. Watson was, as a pioneer in the surgery of the spinal column and spinal cord. Dr. B. A. Watson, of New Jersey, who, says the writer, "bumps a few dogs on their rumps, and declares that it is impossible for the spine to be hurt in railroad accidents." To put it mildly, this is scurrilous calumny, and a deliberate falsification of fact.

Dr. Watson spent thousands of dollars in conducting a series of experiments, which occupied nearly two years, inflicting corporeal injury on over a hundred etherized dogs. That those traumatized, experimental lesions on the canine are not precisely analogous to similar injuries on man, is not denied; no more than is it the case with Senn's work on the dog's intestine. Watson worked with one end in view—*viz.*, to connect cause with effect, and to demonstrate, as he so tersely puts it, "that spinal symptoms after injury are always in direct proportion to pathological changes." He never *wrote* nor *deduced* "that it is impossible for the spine to be hurt in railroad accidents." But he did write, and incontestably demonstrated, that many of those fakirs who have gone through a railroad collision, and claim serious spinal injury, must show that there is indisputable ground for such a conclusion; something more than near-sightedness, indigestion, anæmia and hysteria, which probably wears away; after a liberal judgment is awarded; or, they are squarely and irrevocably beaten.

The experimental work of Dr. Watson on the dog, fortunately, I am able to say, it has been my good fortune to verify on more than fifty cases of spinal traumatism, in every stage and degree of lesion, in my hospital service. I have opened the canal of the spine in the living, and confirmed these conclusions, besides, in many cases, on the dead; and hence, must declare that every case presenting clear and unequivocal symptoms of spinal injury, invariably exhibited bone, vascular, meningeal or medullary lesions sufficient to account for them.

"It will be found universally, that respectable medical and surgical literature accepts the symptomatology of Erichsen as detailed in his work on 'Concussion of the Spine.'"

When?

The American profession, it must be admitted, is easily "hoodwinked" when anything comes to it, labeled foreign. Many of its members, flunkied and crowded around Lawson Tait, till their fawning, cringing servility, finally disgusted the pawkey Scotchman, and he had to practically kick them out. Treatises by celebrated (?) neurologists, when simply built upon compilation and imagination, by those who have never treated a dozen serious spinal traumatism in their lives, may be read with interest; but let no one tell us that we must swallow, *nolens volens;* their author's notions.

It would be interesting to know where any, one of such authors, as Erb, Bromwell, Ross, Gowers, Spitzka, Putnam or Knapp, ever in their lives had a surgical service which included serious spinal traumatisms.

"Erichsen's Disease" and "Railroad Spine," forsooth, are myths, pure and simple. Pathologically there is nothing, absolutely nothing, in a railroad injury which gives it an individuality peculiar to itself; and I challenge anyone to diagnose such an entity, in a case, wherein the history of the spinal condition has been withheld, or rather, the causes which led to it.

The writer says "that it should be remembered that surgeons and surgical works are concerned with the immediate results of the injuries, and do not take up the study of the nervous or mental derangement which follow upon injuries to the head, body and limbs."

This certainly is a new view, of the surgeon's authority and responsibilities in the treatment of traumatisms of the limbs, the cavities, or the trunk. The surgeon is something more than a mechanic.

He deals with a lesion of the spinal cavity, or its contents, as he would one of the cranium, thorax or the cavity of a joint; and, maintains his claim to the full authority in treatment of one, as much as the other, until it has run its course.

NOTE.—Since the above was written, a case has been brought into my service, at Harlem Hospital, which incontestably and unequivocably supports Watson's Pathology of Spinal Lesions. Man admitted July 25, 1892. Struck by a piece of falling timber in the lower, dorsal region. Immediate and complete paraplegia of the extremities. Paralysis of bladder.

July 26.—Operation of trephining the spine. Fracture through posterior laminated arch on each side; and, driven in on the cord. Hemorrhage into spinal canal. Crushed bone removed; coagulated blood clot displaced.

To-day, July 27.—Sensation and motion restored, and patient's general condition excellent. It was the ninth dorsal vertebra fractured.

OPIUM POISONING—BELLADONNA AND COFFEE AS ANTIDOTES.

BY SAMUEL WOLFE, M.D.,
PHILADELPHIA.

JULY 21, at 7 P.M., I was hurriedly called to Mrs. M., aged thirty-two years. Found her deeply narcotized, clutching an ounce bottle with all the label torn off except so much as showed the poison mark. Her pulse was 60; there was froth on her lips; the respiration was slow; the pupils were contracted. From information gained later, she had taken 1 fluidounce of laudanum about twenty minutes before, after drinking freely of beer and whiskey with her husband during the afternoon, ending the drinking bout with a quarrel. I sent at once for a stomach pump, an ounce of ground mustard, and several quarts of strong coffee; gave hypodermically $\frac{1}{50}$ gr. atropeine sulphate, then two teaspoonfuls of mustard in a tumblerful of tepid water were poured down her throat, which was only accomplished with much difficulty; the torpor and hypnotism being very decided. A little later, by means of the finger in the throat, the patient was made to retch, and vomit a very small portion of the mustard water. More was immediately given, followed by liberal drenchings with the coffee, which had by this time been brought in. The pulse had now quickened a little, and the pupils were not so much contracted, and we succeeded in getting the patient on her feet, and after a tramp of a few minutes, during which she several times sank to the floor, we allowed her to rest. Another $\frac{1}{50}$ gr. atropeine sulph. was now administered hypodermically, more coffee was given, and she was again walked. She now vomited very freely; the pupils soon dilated, but not extremely; the pulse reached 120; she breathed fairly well. At intervals she continued to vomit; the tramps, with intervals of rest, and the coffee were all continued till ten o'clock, three hours after the poison was swallowed, after which she was allowed to go to sleep for the night. In the morning there was still nausea, and headache was complained of. A full dose of magnes. sulph. had evacuated the bowels well, and small doses of bismuth subnitrate and calomel were given, with ice to suck, and a mustard plaster put on the epigastrium. The patient next morning assumed her household duties.

The justification for the recital of these details lies in the hope that it may help in estimating the antidotal powers of atropeine; that it may emphasize the necessity for allowing intervals of rest from walking where alcoholics have been liberally used before opium, and where atropeine has been administered as an antidote, and that it may tend to conduce to regularity of administration in times when excitement and disorder too often prevail.

1624 DIAMOND STREET.

IN pruritus, alkalies, such as bicarb. soda, carb. lithium, and the various alkaline waters give excellent results.
—Translated by Bing, *Gaz. de Gynecol.*

GALVANISM IN ATROPHY OF THE TESTICLES.

By ERNEST B. SANGREE, A.M., M D.,
Demonstrator of Histology in the Medico Chirurgical and Philadelphia Dental Colleges.

SIX months ago a man of thirty-five years of age came to me complaining of being generally run down; in addition to this, informing me that he feared he "was getting smaller below." This last rather general statement I took to refer to that appendage of the lower portion of the body, which from many of our male patients is likely to receive the most consideration, and consequently to be uppermost in the mind, namely, the penis. I found, however, on examination that the allusion was to his testicles. These organs had indeed grown exceedingly small, at that time being no larger than very small almonds, and of a flabby consistence, denoting marked degeneration in structure as well as diminution in size. No history of syphilis could be elicited, though he freely admitted being "one of the boys" for a good portion of his life. He did not go on sprees, but was in the habit of taking three good drinks of whiskey a day. This he stopped at my suggestion. So far he had noticed little or no loss of virile power. A general tonic was given him, and for the special trouble I decided to try galvanism. For the first month the sittings were twice a week; after that but once a week for two months longer. Sometimes the negative, at others the positive, current was used. As regards the method of administration, the indifferent pole for the time being was attached to a sponge electrode held in the hand, whilst the application to the testicles was made by rapidly touching different portions of the surface with an olive tipped urethral electrode. As a rule I began with a very mild current, gradually increasing it until a smart stinging sensation was experienced at each touch, and the cremaster muscle firmly contracted. During each application I noticed also that the testicles became considerably larger and firmer. The length of each sitting was about five minutes. After five or six applications it could easily be seen that the testicles were enlarging, and at the expiration of three months, though the applications had been comparatively few, these organs had grown as large as before; and, indeed, he was rather of the opinion that they were a little larger. Whether this increase was due simply to a proliferation of connective tissue cells or to a natural growth of the proper gland structure I do not know. Probably the former is the case; but if normal spermatozoa were found in his semen, doubtless the latter explanation would be true. Whatever the character of the tissue may be, the result was certainly a pleasant one to attain, and one that made my patient on much better terms both with the world in general and with himself in particular.

OUGHT INFANTS TO BE WASHED IMMEDIATELY AFTER BIRTH?—In a paper read before the Section on Diseases of Children at the Detroit meeting of the American Medical Association, Dr. F. S. Parsons, of Boston, says:

All wild animals wash their young directly after birth. The human mother, however, cannot perform such duties in the manner of the lower animals, whose offspring, moreover, are covered with hair, necessitating simply the drying of a wet surface; but the child, with practically no hair on the body, is ushered from an aqueous solution at a temperature of about 100° F., to an aërial temperature of from 20° to 30° lower. Apparently, to guard against this sudden cold, Nature has placed a sebaceous covering, which, if allowed to remain, would protect the child from the chilling influences of the reduced temperature. Dr. Parsons, however, does not so much object to the washing of the child as to the manner in which it is generally done, and which so often leads to catarrhal troubles, varying from simple snuffles to broncho-pneumonia. He recommends a little skirt with sleeves and hood, made of some soft unirritating material—for example, Canton flannel—in which the infant should be placed, after being quickly rubbed with pure hog's lard. Here it should remain for four or five days, when it would become accustomed to the lowered temperature, and could with much more safety be washed; but as this would not satisfy the average mother, he would advise covering the head and body with lard, then quickly placing the child in a tub of water at about 103° F., there cleaning and washing the body with a soft linen cloth. He has never seen a child so treated suffer from catarrhal troubles in any way.

—*Medical News.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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WE are collecting material for another special number on typhoid fever. Our readers are invited to communicate their thoughts and experiences on that subject as soon as possible.

THE USE OF TITLES JUSTIFIABLE AND COMMENDABLE.

MANY people thoughtlessly criticise the prevailing custom among medical men of appending to their names, as author or editor, an enumeration of the various medical bodies to which they belong, and the titles that have been conferred upon them. If they will stop but a moment to reflect, we think that the following reasons will readily occur to their minds:

Medicine is a scientific field in which there are many workers. No individual can become acquainted with them all.

The value of any medical contribution is greatly enhanced if we know that it comes from one who may be safely trusted as reliable authority, and not from some irresponsible novice or over-zealous enthusiast. We wish to eliminate the doubtful elements as far as possible before putting any new theory to experimental test in our own practice. The scientific standing of the man who has put it forth will help considerably to reassure us. Even if we are not acquainted with him, or have never read any of his works before, we can form a pretty good idea of his standing and trustworthiness by knowing what scientific bodies of recognized standing are willing to acknowledge him as a member; what ones have conferred especially distinguished honors upon him; what positions as teacher he has held, and what other work he has done as editor and author.

Again, in many scientific bodies the members may not all know each other. To any member of such a body, perhaps in some far distant land, the writings of a fellow-member will come with additional interest and confidence.

These, and perhaps other reasons which will suggest themselves to the reader, demonstrate the utility of a custom which might otherwise be misjudged as mere ostentatious display. We are not unmindful of the fact, however, that a few men may become so eminent that they may dispense with all titles, their simple unadorned signature being sufficient to identify their work wherever found.

J. J. T.

CHOLERA NEWS.

AN epidemic of cholera is progressing toward us with a rapidity that is unpleasant to contemplate. While we do not believe that the disease, as an epidemic, will prevail in this country within the near future on account of the excellent sanitary forces standing between us and the affected regions, yet we believe that it will require the utmost vigilance and entire resources of that force to avert such a disaster.

In France, they have been compelled to acknowledge their so-called "cholerine" to be genuine cholera. To substantiate our views upon the gravity of the situation, we quote from the special Paris

correspondent of the *Lancet*, writing on July 12:

"A fortnight ago, under a pledge of absolute secrecy, I was informed that all the talk about cholera nostras and choleraic diarrhœa was concocted merely to avoid panic. It was necessary to account for the sudden deaths which were occurring in such a manner as to avoid alarming the public, and none of the authorities dared to confess that cholera prevailed in and about Paris. Then I was told that careful bacteriological researches had been made. The comma bacillus had been found in the dejections of the patients. At first, some doubts existed as to whether this was the real germ of Asiatic cholera. It was maintained that similar germs had been found in previous years, and yet no cholera epidemic, as we generally understand the term, had occurred. Also, it was found that, unlike the germ of Asiatic cholera, the comma bacillus had failed to give the usual reaction when grown in milk. Soon, however, it was seen that, if the bacillus was cultivated for three days, then its action upon milk was exactly similar to that produced by the germ of Asiatic cholera. Finally, these various experiments led to the conclusion that the comma bacillus, if not quite identical with that discovered and described by Dr. Koch in India, resembled in every respect the microbe of cholera cultivated at the Bacteriological Institute, of Saigon, by Dr. Calmette. As for the effects on the patients, they were identical—rice-water evacuations, cramps, cold at the extremities, black vomit, cyanosis, etc. Post-mortem examinations have confirmed the opinions resulting from bacteriological researches; and by the side of what seemed to be cases of only cholera nostras, there have been other, and many other, cases that in no wise differed from Asiatic cholera.

"Words are not strong enough to express the indignation that must naturally be felt at the persistent efforts made to conceal the true facts, which are now at last openly admitted and published in the medical world, though the daily political papers still continue to speak of the "choleriform" epidemic. The means of disinfection and isolation in about Paris are far from perfect."

* * * * * * * * * *

"With slight fluctuations, the present epidemic is continuing, and some cases have occurred within Paris. Perhaps an idea of the gravity of the situation may be formed from the fact that there were 217 disinfecting operations performed last year at the central stations in the course of the month of June, whereas, during the month of June this year, the number has increased to 1,223. Since the month of May last, no doubt can have been entertained that we were in the face of genuine cases of cholera, and yet it is only within the last few days that the fact has been admitted. Some 200 deaths are supposed to have occurred, and the proportion of deaths is two out of every three cases. It would be reprehensible to wait for anything more serious than this before warning the public."

But, lest we base our views too confidently upon one report, we will quote from another correspondent, date of July 13. After changing his diagnosis of the disease as "cholerine," given the week previously, he says:

"Its appearance at Ivry and at Noisy-le-Sec, both situated up-stream, cannot well be attributed to the drinking of contaminated Seine water. Is the disease really Asiatic cholera? In an able article published in the current number of *La Medecine Moderne*, Dr. Talamon, the talented editor, replies unhesitatingly in the affirmative. He regards it as proved that the comma bacillus has remained latent until lately in the soil of the Plaine St. Denis since the year 1884, the date of the last epidemic. He recalls the fact that the cholera of 1884 imported to Toulon made its first appearance in the neighborhood of Paris at St. Denis and Aubervilliers. He observes great similarity between the present epidemic and the outbreak of cholera in 1890 at at Puebla de Rugat. In both instances there was no importation from abroad, both occurred at the same time of the year and both were characterized by slow extension and endemicity. The survival of the cholera bacillus in the soil since 1884 is explained by the researches of Hueppe, Wood, and Lustig. These *savants* tell us that the cholera bacillus is both aerobic and anaerobic, according to its habitat. In the intestinal canal it is anaerobic. Its virulence is here very intense; but it is, on the other hand, more vulnerable to the destroying action of chemical agents. Hence the importance of the prompt disinfection of choleraic stools. In the superficial layers of the soil the bacillus is aerobic and its vitality becomes greatly increased. Its power of resistance is further increased by the formation of jointed spores—the "zooglees arthrospores" of Hueppe, which, forming a kind of thick, viscid network, offer protection against the influence of putrefaction and desiccation. Combined dryness and heat favor its growth, and these atmospheric conditions have been present for the last two months. It further appears that at Aubervilliers extensive road repairing has been in process for a considerable time, thus setting free colonies of microbes, which, finding their way into the drinking water, spread the disease."

Thus we may see the absolute necessity of thorough work in guarding against a possible importation of this most undesirable European product. If such efforts prove successful, we may give the business community another tangible example of the money value of a thorough public health department. Incidentally, also, we may be able to teach them the importance of having a Cabinet Secretary of Public Health.

Book Notices.

THE AMERICAN THERAPIST. A monthly medical journal, edited by JOHN AULDE, M.D., Philadelphia. Price, $1 per year. Published by the Therapist Publishing Co., New York.

This is a new aspirant in the field of medical journalism, devoted to the department of therapeutics.

DISEASES OF THE THROAT, being Volume II of the Diseases of the Nose and Throat. By FRANK HUNTINGTON BOSWORTH, A.M., M. D. Cloth, 832 pages, illustrated. Published by Wm. Wood & Co., New York.

This work is a masterly treatment of this most necessary specialty. It is a work that can be very easily followed by the general practitioner without difficulty.

A NEW PRONOUNCING DICTIONARY OF MEDICINE. By JOHN M. KEATING, M.D., Fellow College of Physicians of Philadelphia, etc., and HENRY HAMILTON. Price, cloth $5.00; sheep $6.00 net. Published by W. B. Saunders, 913 Walnut street, Philadelphia.

This is a voluminous and exhaustive handbook of medical, surgical and scientific terminology, containing concise explanations of the various terms used in medicine and the allied sciences, with phonetic pronunciation, accentuation, etymology, etc. It contains tables of bacilli, micrococci, leucomaïnes, ptomaïnes, etc., etc.

It has been the aim of the publisher to place in the hands of students and the medical profession, a work which should contain the names of hundreds of new words now being adopted, and at the same time, by leaving out the numerous obsolete terms contained in most dictionaries, keep the volume of such a size as to be most convenient for ready reference.

TABLE TALK. Published by the Table Talk Publishing Co., 1113 Chestnut St., Philadelphia. $1.00 a year; 10 cents single copy.

A magazine that tell us how to live, and how to enjoy life while we have it ought to be entitled to much more than an ordinary amount of consideration and support; the great success of *Table Talk* is therefore not a matter for wonder. Its recipes for the kitchen, its instructions and suggestions in matters relating to household management and economy, and the thoroughly practical way in which they are spread before the housewife are able proofs that it really is what it claims to be—a household magazine. The August number is now ready, and full of seasonable suggestions that the housekeeper will be the loser for not reading.

The Medical Digest.

APPARENT DEATH IN CHOLERA.—The approach of cholera is already bringing much disquietude to the nationalities of Southern Europe, particularly to those who people the Mediterranean shores. The Italian, French and Spanish ports have, on each former descent of the scourge, suffered severely, all the more that in their conscious neglect of sanitary precaution their authorities invariably lose their heads in presence of the invader and attempt to atone by a few days' feverish energy for the culpable remissness of years. But there are special causes of the uneasiness, not to say positive panic, which the slightest hint of the advance of cholera arouses in those populations. Their custom of allowing but a few hours' interval, sometimes hardly a day, to elapse between decease and burial has, on the occasion of increased mortality from epidemics, induced certificates of death to be prematurely given, with the horrible result that apparent corpses have come to life on their way to the tomb or the crematorium, and with the necessary inference that not a few must have been buried or cremated when the vital spark, so far from being extinct, might still have been kept alive. The great Tuscan pathologist, Pacini, some thirty years ago, published a memorable pamphlet on "La Morte Apparente della Colèra," and having instanced a number of cases in which

the seeming corpse had been snatched from the very brink of the grave, he proceeded to give rules by which even in collapse the apparent victim to cholera might be resuscitated. Among his prescriptions, that of the intravenous injection of bay salt, as suggested and practised in 1832 by Dr. James Macintosh, of Edinburgh, held a prominent place, and by this means, particularly in the cholera visitations of 1877 and 1884, the restoration to life of many duly certified as dead was just in the nick of time effected. In the latter year, however, a remarkable and extremely painful instance of the all too tardy resort to the practice occurred in the person of a distinguished Genose physician who, having overworked himself in the public cause during the epidemic, was himself struck down just when it was in full retreat. Every care was bestowed upon him, but he rapidly sank into collapse, and within forty-eight hours he was thought to be, and certified as, dead. Burial arrangements were in progress, and the family, sitting disconsolate in a room adjoining that in which he was laid in his shroud for burial, were expecting the arrival of the undertaker every moment, when, to their mingled horror and delight, the door was feebly opened and the apparent corpse presented himself and, in a voice scarcely audible from weakness, remonstrated with them for having left him so long unattended. Instantly they conveyed him back to bed and employed, under the best professional advice available, every means that could be imagined for his rescue, but in vain. He died a few hours afterwards of cardiac failure. The case was much commented on at the time as a typical example of what might occur on the strength of death certificates prematurely given, and so Pacini's method was reapplied with enhanced vigilance on every cholera patient who had reached the stage of collapse. The epidemic ran its course; the panic and the vigilance born of it disappeared, till now, when cholera is again within measurable distance of the Mediterranean seaboard, Pacini's name and practice are once more trotted out. The southern populations, however, must surely have learned by this time that prevention is a better safeguard than cure, be it as ingenious as it may, and that to leave their ports in a mediæval state of filth and neglect invites those cholera explosions that never occur on so sudden or so vast a scale in the more civilized harbor towns of the British Isles or of the Dutch and Danish coasts. With the experience of Naples and Spezzia still recent, sanitary rehabilitation must have made some way towards the protection of regions to which quarantine and "hygienic cordons" have ceased to give the security so long laid to their credit.—*The Lancet.*

THE CHOLERA IN KASHMIR.—Some further particulars of the cholera in Kashmir are to hand in the form of a letter from Mr. A. Neve, the senior medical missionary, who, when the epidemic commenced, was working single-handed, as his brother, Dr. Ernest Neve, had gone with a party of Moravian missionaries to Ladak. He had, however, a valuable native helper. As soon as the epidemic became at all pronounced, the British resident and all the European visitors took flight to Gulmarg, a hill sanitorium some thirty miles from Srinagar. Mr. Neve and his assistant carried out as systematic a visitation in the city as was possible, but little could be done either in the way of sanitation or of medication, as the cases were rarely seen during the first few hours, when drugs are really valuable. The hospital was as far as possible cleared out, the patients being sent away to their villages lest in their weak state they should contract the disease. "I get up very early," continues Mr. Neve, "and ride to the bazaar. The head man of each district then comes and escorts me to the new patients in the neighborhood. Many of the houses are two- or three-story and one has to climb up and down the most tortuous stairs, usually very steep and the ceilings very low, so that my thick sola topi has been almost smashed to pieces. The people all crowd round the unfortunate patient. A well-known man will have twenty or thirty neighbors sitting round him, and the women do not reserve their wails for the dead, but beat their breasts and tear their hair and scream, 'Hai, hai, wai, wai,' if any one is badly attacked. . . . . For a time there seems to be no 'purdah' and no class is specially inaccessible. In fact the well-to-do Hindus seem quite as willing to receive me as any others. In many cases one can do little; in others one can turn the scale. But although a few lives here and there have been saved, I think the moral effect

of our work is more important. The people well know the apathetic selfishness of their co-religionists and they see the missionaries and ladies as well as others, going about trying to relieve suffering." Mr. Neve's assistant succumbed to the disease, though after transfusion he rallied for a short time. The Indian government have deputed Surgeon-Colonel Harvey to make a searching inquiry into the epidemic, and he has taken up his quarters in the mission house with Dr. Ernest Neve, who has returned, Mr. Arthur Neve going out into the villages where the cholera, after having abated in the city, was becoming rife.—*The Lancet.*

MEDICAL PRACTITIONERS AND THE GENERAL ELECTION.—As a commendable example of practical politics, we wish to call the attention of our readers to the following, from *The Lancet.* We wish our American physicians took as active an interest in the welfare of their profession :

"In illustration of the fact that medical men are becoming alive to the necessities of bringing their particular case before the notice of the candidates for Parliamentary honors, we note that a deputation of medical men waited upon Mr. Byron Reed, a candidate for the Eastern Division of Bradford, to ascertain his views on matters affecting the profession in its relation with the public. The importance of the facts is not restricted to one constituency, and we therefore trust the attention of all candidates may be directed to the facts which were urged by this deputation.

"Dr. Hime, in addressing Mr. Byron Reed, alluded to the progress of unreasonable legislation which singled out the medical profession for the compulsory performance of certain duties, which the Legislature had come to regard as of great public utility. Now the medical profession objected strongly to the knowledge which they had gained, without the assistance of the Government, in their medical studies being claimed by the public as their property, under any circumstances and whether they were paid for it or not. At the present time, a medical man was under legal compulsion to sign a certificate of death for which he received no remuneration whatever. By law the certificate could only be utilized for the purpose of burial, but in practice it was utilized for insurance, for club purposes and many others. The notification of infectious diseases had also been made compulsory on medical men, a thing which was without analogy in other cases. He drew attention to the enormous number of deaths which were not inquired into, although they were not certified by any medical man. It was left absolutely optional with the registrar whether he would accept the tale of any informant as to the circumstances of a death and certify for burial or not. Throughout the whole country medical men found it not infrequently happened that, if knowing of the circumstances of a death, they thought it necessary to refuse a certificate because they considered there had been foul play, yet, when they notified that fact which was the result of their personal knowledge, the coroner might and did constantly grant certificates of burial. In order to justify him in doing so, as a rule, he sent his policeman to make inquiries. He, of course, only received the information from interested parties, and that was one-sided, and supported his (Dr. Hime's) statements.

"Other subjects calling for reform were instanced, including the question of medical and post-mortem examinations in medico-legal cases. The inadequacy and injustice of the present method, by which any practitioner, who may be practically the mainstay of the prosecution, can alone and unaided and without any supervision make a post mortem, on the report of which a life may be dependent, were strongly condemned.

"Mr. Byron Reed, in reply, expressed his astonishment at the number of facts brought to his knowledge for the first time. They were such as called for the serious consideration of the Legislature, and he promised, if returned to Parliament, that any bill bearing upon the medical profession or its relation to the public, either directly or indirectly, should not be carried without receiving his most serious attention, and he would, as far as in him lay, urge this upon those members of the House with whom he had any personal influence.

"The deputation thanked Mr. Byron Reed for the interest he took in the matter and the courtesy with which he had received them, and retired."

Regarding this incident, *The Lancet* comments, editorially, as follows :

"It is certainly a somewhat unique occurrence for a body of medical men to interview a candidate for parliamentary election, with a view to ascertaining whether he is sound on important topics in which they are interested. *Tempora mutantur, nos et mutamur in illis.* In these days, when every profession and separate interest has come to press forward its claims on the attention of Parliament, those who are too backward and modest to do so are apt to be forgotten and neglected. It may be owing to this, to some extent, that the medical profession has never received that honorable recognition and distinction from Parliament to which it is so justly entitled, from the eminent services it incessantly renders the nation, and from the learning and ability of its members. Hence, we can not but highly commend the action of the medical practitioners of Bradford who waited on Mr. Byron Reed, one of the candidates for Parliament in that borough, and laid before him some important questions on which they wished to know his opinions before the polling day. The action of the deputation was all the more praiseworthy, seeing that, following the high traditions of our profession, they sought rather to gain benefits for the public than merely to forward their own particular interests. It is true they uttered a protest against legislation which has recently singled them out from the rest of the population, and placed them under penal obligation to render services to the public for which, in some instances, they receive no remuneration. Medical practitioners are not State officials. If the State wishes to reap the fruits of medical science, it must requite the services rendered. The most obvious way of doing this would be by assisting the profession in the acquisition of that knowledge which the State is now coming to see is indispensable to the well-being of the public and by protecting medical men in the practice of their profession. The subjects which Dr. Hime, as the chief spokesman, referred to, are of importance, and the deputation deserves credit for having drawn public attention to them."

Have we no measures of public importance to urge before our candidates, asking for our suffrage in the United States this year? Should not the medical profession of this country take a deeper interest in public affairs?

BARBARIC BRAZIL.—Two dreadful stories are told in the last number of *Fair Play*—a journal which has throughout interested itself in this subject—as to the treatment of yellow fever cases in a hospital in one of the chief ports in Brazil. The story, as told by our contemporary, is as follows: An engineer engaged on board a vessel in the port, was attacked with yellow fever, and removed to the hospital. In the next bed to him was a man, also suffering from yellow fever. Two Brazilian attendants, being unable to do anything with this man, who was delirious, by mild means or by simple pressure, got him out of bed, threw him down several times, and, this strong treatment failing to produce the desired effect, kicked him violently in the side, with the result that in a quarter of an hour or twenty minutes he died. To make matters worse, the vomit and excreta of the patients were never removed more than, at the outside, once a day. Any one can judge of the state of affairs in a hospital in a hot climate where matters were allowed to proceed in this fashion, and every one must pity the unfortunate seaman, whatever his rank may be, who finds himself exposed to the tender mercies of a Brazilian hospital staff. As a pendant to the story of the hospital treatment in Brazil, is the story from Santos. In this port, as is well known, the yellow fever season has been unusually fatal. Upwards of 200 captains of all nations have died there within the last season, to say nothing of the crews. It appears to be a rule of the port, that any person attacked with yellow fever has at once to be removed to the hospital. One captain had with him his son, quite a youth, who got the yellow fever, and was removed to the hospital. On his father applying to see him after the removal, he was told that he was dead, and that the body had been taken to a kind of mortuary. To his surprise, he found the poor lad was not only conscious, but able to speak to him. He was dying rapidly, surrounded by corpses, but not dead!—*British Med. Jour.*

VASELINE AN UNDESIRABLE LUBRICATOR.—In *Memorabilien*, Novotmy has given a warning against the use of this substance to lubricate sounds and other vesical instruments. He has twice found this insoluble material serving as a nidus about which a mass of detritus had accu-

mulated or acting as the rallying point of urinary sediment. A very little of the lubricant, left behind each time that a sound is passed, would in time, in some cases, attain to the proportions of a foreign body of appreciable mass. In one of Novotmy's cases the quantity of mixed sediment and lubricant amounted to 150 grs. in weight.—*Jour. of Am. Med. Assoc.*

Bromoform for Whooping-Cough.—In an article giving favorable results in the treatment of pertussis with bromoform, in the *Canadian Practitioner*, Dr. J. T. Duncan, of Toronto, summarizes as follows: The results may be thus stated:

1. Bromoform in the doses stated is a perfectly harmless remedy.
2. The attacks diminish in number and severity.
3. The first paroxysmal vomiting disappears in two or three days.
4. Nasal and other forms of hemorrhages soon disappear.
5. It acts benefically in complications, largely by giving affected organs, *e. g.*, lungs, a chance to rest.
6. It undoubtedly shortens the duration of the attack.

Bromoform is a heavy sweetish liquid. It is best given dropped in a teaspoonful of water. Given thus, children like it; but be sure the drops are swallowed, as they sink through the water on to the spoon. It must be dispensed in small amounts, and kept from the light, as it is apt to change.

Surgery Under Hypnotic Suggestion.—Since writing an account of some earlier cases[1] I have been able to demonstrate some good cases to the profession in Baltimore. Without being unduly prolix, I will allow the cases and facts to speak for themselves.

Case I.—Mrs. S., a young married woman, aged seventeen years, had miscarried about three months before she came under my care. She had been treated at the time, but gave a history of retained secundines for ten days. She was suffering so much pain, and was so sensitive to the touch, as to make any thorough examination without the use of anæsthetics impossible. I decided to try hypnotism, and after three trials developed a good subject. The experiment was so successful that I have concluded to use it in these cases whenever possible. I found in this case a generally disorganized condition of the pelvic contents, which required surgical interference, and was able to work unimpeded and assisted by the patient.

Hypnotic suggestion will enable you to have your patients place their body or limbs in any position you desire, and they will remain so until by suggestion you change their positions. In fact, you are able to do without a number of assistants. I had one patient who would, while being operated upon, assist in handling instruments, and even in sponging the wound at my suggestion, while, of course, being perfectly unconscious of the fact that he was himself the one being operated upon. The one great advantage hypnotism has over anæsthetics is the avoidance of the disagreeable after-effects, for the patient awakens as from a sound sleep. We also avoid all danger. This case of Mrs. S. was shown to a number of the leading medical men here, who made all possible tests as to her condition of complete anæsthesia. I might add also that she was suffering greatly from insomnia. For this I would will her into a sound sleep at regular hours, the sleep to last from eight to ten hours. Finally, I could from my office, some two miles from her residence, will her to sleep.

Case II.—L. R., aged seventeen years. First came under observation in Paris. He was a page in a hotel. Seeing him several times a day, I soon found that he could be easily endormed. He complained of an ingrowing toe-nail. Putting him into a state of hypnosis, I found a very ugly toe, upon which I operated with ease to myself and unconsciously to the boy.

Case III.—B. B., my office-boy aged eighteen years. He is like a piece of clay in my hands, and offers so good a demonstration of the power of hypnotism that I have shown him before the profession here. To relate my various experiments with him would not be in accord with the purpose of this paper. Some of the experiments would read like fairy tales had they not been witnessed by responsible medical men. The only therapeutical use I have made of it with him was in sea-sickness. He suffered greatly coming

[1] See Hypnotism *vs.* Morphinism, by the author. Also cases quoted in *Am. Jour. of Inebriety*, January, 1892.

out to America, and after allowing him to be sick for a day, so as to give it a fair test by the method of suggestion, I completely effaced any inclination to its return.

Case IV.—This is a very interesting case from several points of view. Joseph B., lawyer, aged forty years, a very highly educated man, who, up to a few years ago, enjoyed a large and lucrative practice. Had been a temperate man up to his thirtieth year, when he began to drink moderately. It is the same old story—practice gone, friends lost, money squandered, self-respect nil. Doctors and asylums had been tried for years with no success. Hopelessly, yet as a last resort, he was sent to me. Fortunately, he proved a good subject. By suggestion I made him so weak that to move from his bed for six weeks was an impossibility. Meanwhile I would suggest hunger, and was able to nourish him rapidly. During the periods of craving for liquor I would put him in a state of hypnosis, and tide over the period, giving him liquid nourishment, which was taken with the same gusto as would have been a cocktail. After six weeks of this treatment I would offer him liquor, suggesting the most disagreeable odors and tastes, and the glass would be thrown to the floor in disgust. Eight months have passed since he has tasted liquor; he is rapidly regaining his practice, and is now the pride of his family.

I do not state this case as a cure, as the time is too short to lay any great stress upon it; but I do not believe the patient will ever return to his old habits again, especially if I retain my present power and can see him frequently. A prominent factor in this case is that there is no family history of alcoholism.

I have found hypnotism useful in allowing painless parturition, also in nymphomania.

As I said at the commencement of this paper, I did not intend to give any more than plain facts. The therapeutical effects, theories, discussions, and the direct bearing that hypnotism has upon our profession from a medico-legal standpoint, I leave to those better qualified than myself to speak, admonishing them, however, to remember the question Socrates put to Theætetus:

"Are we, then, still pregnant and in labor, my friend, with reference to science, or have we brought forth everything?"

—Howard, *N. Y. Med. Jour.*

THE WILD BILBERRY IN RENAL DISORDERS.—Professor Winternitz, of Vienna, directs attention to the wild bilberry, with a preparation of which he has successfully treated several renal cases. Weil, of Berlin, adds new testimony to the record of value attributed to this drug by Professor Winternitz, in assuring the profession that it has acted most beneficially in curing a case of diabetes mellitus. He used a preparation of the leaves of the plant pulled before the berries are ripe. Two handfuls of the leaves are infused in 2 liters of water, and boiled down to half.

—*Medical Press and Circular.*

DEBIT AND CREDIT IN THE ECONOMY OF THE NERVOUS SYSTEM.[1]—The nervous system is not independent of the remainder of the body, especially with regard to its nutrition; but it possesses, nevertheless, a certain self-existence by which it is enabled to maintain itself above many pathologic disturbances of the remainder of the body.

The nervous system, too, is governed by an economic rule. Everybody is originally endowed with a certain amount of nervous forces, as it were a capital which he has inherited from his ancestors and parents, and with this capital he has to go on through life. He may augment and increase it, but he may also reduce and even exhaust it. He who spends more of his nervous forces than what he receives, is on the inclined plane which leads to exhaustion, and he who exhausts his nervous forces in a permanent manner is bankrupt, although he might be a millionaire, and there are many of such nervous bankrupts jogging along through the streets of our large cities. There are many silent disorders which a layman scarcely notices, for which a layman has no understanding, and yet fully apt to render a person profoundly unhappy.

Our nervous system consists of the brain and the spinal cord; the nerves are its emissaries; they are the conduits which connect our peripheric organs with the central part. The best representation of nervous forces is formed by regarding them in the light of some tonic power. It resembles, *e.g.*, the penned-up vapor of a steam-engine. After a man has enjoyed a good sleep, there is another ten-

[1] From a lecture delivered by Prof. Dr. Grashey, Munich.

sion in his nervous system than at the time he went weary to bed. This fact of a tension being lost by work, and being able to be regained by sleep, is of paramount importance; and I proclaim sleep, without hesitation, the most important source of revenue in the economy of the nervous system. Unfortunately, many persons—and, in the first line, youth—view sleep as a necessary evil, as some importune fellow who, the more he is neglected, the more he knocks at the door. But the simple fact that sleep always returns, and even possesses the faculty of breaking the strongest will-power, is significant enough. It would be very unfortunate if sleep, like some prudish damsel, would, after the first offense, abandon us forever.

Man, in his hunt for gain and enjoyment, has learned how to chase away sleep by artificial means. He avails himself of all possible tricks for the purpose of "prolonging" the hours of work and of pleasure. He takes coffee, tea or nicotine, and woe to him who proceeds carelessly, for exhaustion is the infallible end. It is true, in this stage, he is not lost without remedy, provided he has the courage of confessing that he is bankrupt; provided he has the courage of going into liquidation and of limiting his expenses to a minimum, in this case he may still be saved. But men generally lack this courage. They recur to another system—they contract debts. They borrow force, in all appearance; by this they quiet their conscience, only to render the catastrophe even worse. They take to artificial soporifics—morphine, chloral, uretan, etc. Sleep, induced by these substances, is not normal, has not the power of refunding the expenses which we have had, and I would caution everybody against applying them.

Fortunately, sleep is not the only means of augmenting the nervous forces. There is an intermediate stage between work and sleep. It is recreation. The division of labor which in our days is necessary in all business pursuits as well as in science, which more or less transforms every one into a specialist, has for consequence that not all organs of the body, not all nerves, are equally fatigued. Thus it is not necessary to rush right away from work to sleep. On the contrary, it is even better, after having worked intellectually, to allow an intermediate pause to intervene. The advantage of a gradual transition from work to sleep has been known long ago. Cicero says, in his speech for the defense of poet Archias, that poets deserved the highest appreciation, because in their poems resided the power of gently carrying the overworked spirit to its rest. We, too, should avail ourselves of this same remedy. Recreation should be considered from a higher standpoint than usually. Many one who takes his vacation for a fortnight or a month, fails to obtain the expected restoration. Why? Because the transition from activity to rest was too rapid. We all know how things are being managed. This and that has to be settled and finished, then we start and abandon ourselves to complete repose. But too soon the last vacation day arrives, we step in again and a mountain of work is waiting for us. I think this modern vacation system is insufficient. I am of opinion that the old recreation method is preferable, and that we should not sacrifice entirely the old recreation method to our new one. The Bible says: "Thou shalt work for six days and rest on the seventh day." It means the Sunday rest, returning every seven days. The little debts, accrued during the week, are paid off with much more ease at the end of it, than by waiting for a whole year. Nor will a three or four weeks' vacation equal the fifty-two days of rest. The latter rest, in its sporadic distribution, is much more profitable. We don't get off the track, and this is incontestably a great advantage. So, while preserving the modern vacation, let us stick to the old and well-tried method of Sunday rest.

There is a third source of increasing the capital which we possess. This source is exercise. Exercise is a marvelous institution in our organism. With each repetition a work becomes easier and we attain finally a working possibility which we had never thought of. Work invigorates not only the muscles, but also the motary nerves and the higher nerves. Intellectual activity is capable of a high increase; yet exercise will be of benefit only by observing certain laws. The ancients knew that we should not proceed too rapidly in this respect. *Null dies sine linea* and *Nunquamotiosus*, means: "You should progress every day a small amount." This constitutes a significant hint. Any one who wishes to advance,

should, at the same time, pay attention to the curious sensation which nature has given us as a signal, and which we should never pass—the sensation of fatigue. Fatigue appears later and later in consequence of exercise, and we are gradually enabled to perform work which a beginner is compelled to abandon after a short time. Exercise is the real foundation of man's educability, and this faculty should be taken into account before everything in the education of our youth. In this connection I would call special attention to one point which is always lost sight of. Exercise should be applied less to the acquisition of knowledge than to certain functional capabilities.

We may exercise our memory and acquire knowledge. But this is entirely different from the notion that education and culture consist in filling mechanically a young brain with a certain sum of knowledge. Human knowledge is assisted by dictionaries and cyclopedias. But there are no dictionaries of capabilities. Whatsoever is acquired by exercise remains a property of our mental power. For this reason our intermediate schools are rightly called "gymnasia," *i.e.*, places of exercise. According to my view, from the standpoint of a neurologist, their task is not to cram people with knowledge, but rather to exercise their intellectual forces by applying them to the various subjects. When we see some one make use of some gymnastic contrivance for the purpose of increasing his strength, we should not say: He will never need it! The same holds good of intellectual education. In practical life, we seldom need our Latin and Greek, but what remains is a certain power of reasoning, analytical and synthetical. This consideration should not be lost sight of in education. But, under all circumstances, the sensation of fatigue should be taken into account, and a young man who feels fatigued, should be allowed a recreation. Beware of advancing too rapidly, of overbending the bow! Let us follow the fundamental principle of training. It is impossible for us to exceed certain limits traced by nature. As soon as we pass them, we resemble a machinist who would try with 75 or more atmospheres, a machine constructed for 10 atmospheres. An explosion may be the result. It is the same with the nervous system. The nerves may be suddenly struck with total exhaustion by overbending the bow.

How is it that just in our times so many nervous diseases are being observed? Our ancestors kept awake for whole nights like we, and subjected themselves to great exertions; but they knew nothing of this long procession of nervous disorders. Has man changed? Has he become more inconsiderate? On the contrary! Many have to suffer this exhaustion of their nervous system without their own fault, by the force of environments. It is the peculiar character of our epoch which induces it; the immense increase of population, the agglomeration of so many thousands in our large cities, the excessive traffic absolutely necessary to provide these human masses with the possibilities of life. The whole modern mode of living is accompanied by a constant expense of nervous force. Our relations with other men have at least been decupled in the last fifty years; every single individual is considerably more drawn into contact than in former times. These circumstances, which we are unable to change, are the chief origin of the nervous disorders which afflict us nowadays.

Is there absolutely no remedy? There is a remedy. We could not, and we should not, subject traffic and our exterior life to arbitrary limitations, but we should follow the indications of the times—*e.g.*, by rendering traffic more pleasant and easier, establish noiseless means of communication, do away with irritating emanations of vapor and smoke, and the like. Our optic nerves being protected by the iris against an excessive intensity of light, we should turn our attention to the serious dangers threatening our eye from a lack of light. Our modern intellectual occupations are not supported by a sufficient quantity of light, and for this reason all efforts tending to an increase of illumination, as, *e.g.*, the introduction of electric light, should be favorably received. And let us erect palatial buildings for our school children!—*Internat. Pharmaceut. General-Anzeiger.—Pacific Record of Med. and Surg.*

An Electrical Novelty. Natural Electricity and Physiology.—Let a man be placed on an electrically insulating glass stand in a dry atmosphere, and let him begin exercising with a pair of

dumb bells; let the soles of his feet be electrically connected with earth by a copper wire having fixed on it a galvanometer; it will be found that as he exercises, the galvanometer will be strongly deflected, showing that a current of electricity is passing from the man's feet soles to the earth. This has been practically demonstrated, and it so exactly coincides with my estimate of electricity, as it exists in and affects the animal system, that the following practical deductions can hardly fail to greatly impress, if not satisfy, even the most skeptical. As theory, however, is ever less satisfactory than practice, I appeal to the latter to establish the real value of what I am sanguine enough to consider a valuable discovery. My discovery is, that civilized man is seriously damaged in health by wearing on his feet a covering in the shape of prepared leather, which more or less insulates his body from the earth. It is for this reason, principally, that he is so notoriously inferior to savages, or to people living in a semi-barbarous state, or to the lower animals, in powers of recuperation under bodily injury, as well as in suffering from many diseases to which these others are total strangers.

Now, to an electrical engineer (to whom, unfortunately, all electrical questions are at present referred) the current detected as passing between the man and the earth, is so mean a thing, dynamically, as to be entirely beneath his notice; and, as to insulation, he immediately assures me that he can force through my shoe soles enough current electricity to kill me on the spot! Granted. But I am not speaking of what may be forced; I am speaking of Nature's quiet regulation of electric potentials in the human body—natural or static electricity. It is not an inapt comparison to speak of these two electrical conditions as analogous to that of water, in the two states of steam and nature's evaporation. These are both the vapor of water, but, dynamically considered, of what account is nature's evaporation to the engineer? He touches his safety-valve and cries: "There's potential for you!" He can not measure, nor has he ever considered any force whatever of so low potential as that of nature's evaporation. Yet how stupendous are the results of this low form of force in its place—Nature! In the same light, although electrical engineers look with scorn upon the (to them) weak or undistinguishable currents that pass between the bodies of animals and the earth, yet that lower form of electrical potential, like the milder form of evaporation, is of vital importance in its own place—*viz.*, animal life.

Dr. Waller, of the London Hospital, after devoting four years of close observation to this question of electrical therapeutics, using the great facilities in his hands for the most careful experimental research, writes as follows:

"One of the most fundamental and certain facts in physiology is, that the active state of a living tissue is marked by a fall of electrical level; in other words, an electrical depression is the best, most certain, and most delicate physical sign of physiological action."

By way of illustration, from matters of common knowledge, it is not difficult to find facts which are striking, if not convincing enough for any one. Take the rich, and the very poor or half barbarous living families in the country, or country towns. Look at their children. The lady from the hall, visiting the mud hovels on her estate, is ever confessing that she almost dies of envy of poor Mrs. Buggins, to see the round, rosy cheeks, sturdy limbs, and bright liquid eyes of her barefooted little brats, while sighingly contemplatingly her own pale, puny, and sickly darlings. "And yet," says the lady, "I feed them on as simple food as you do yours, Mrs. Buggins, and they continually play in the same open air as your little ones thrive in. What is it, or why is it there should be this difference?" Such has been the question of all time. The little, bare, red feet of the common child have always escaped notice as anything more than causing an appeal to the hearts of the rich, making them send the poor mother a supply of left-off shoes and stockings for her shoeless urchins; which, however, said urchins decline to wear; "they make their feet hot and tired," etc., and off they go on their own leather again; and they continue to grow healthy and strong as young oxen, while on the same soil and in the same air their rich neighbors do the reverse. Negroes and coolie laborers, who never by any chance wear shoes, are remarkable for their freedom from diseases to which the civilized are subject. They have no toothache—their teeth, indeed, are proverbial for whiteness and health, without any toilet attention

whatever. They are never bald, and their sight is remarkably clear and good, even in advanced age. The eyes of such people have that liquid clearness that one sees so seldom among ourselves; it is the characteristic eye of most wild animals.

To attribute this superiority to a different style of food, etc., is simply absurd, for individuals from among such people who have been employed in some capacity where they have to wear shoes—other conditions remaining the same as before—very soon show the usual symptoms denoting a departure from nature's law—*i.e.*, they become bald, weak-eyed, and have decayed teeth, etc., such as they never before knew. In this I speak from personal observation during two years' life right among such people in the West Indies.

Again, in Scotland, in the grounds of large mansions, where immense lawns are kept closely mown by horse power, I observed that the men never used the same horse two days in succession. The reason of this I found to be, that as the horses in this work are always shod with great leather or rubber overall shoes or slippers, to prevent their cutting or defacing the sward, they cannot be so employed day after day without serious damage to their general condition, but especially to their eyes. A week or two continuous work at this invariably injures horses' eyes, some becoming in that time totally blind. I pass over cases where continued damp or wet shoes and stockings have led, through colds and coughs, to phthisis, and where injury to the foot sole affects the jaws, wherein our teeth undoubtedly vegetate, like plants in the ground—thus indicating the possibility that dental caries proceeds from a continual interference with Nature's electrical provisions in our feet.

I ask any man, before he decides this question for himself, to consider for a moment the wonderful construction of his own feet soles. Why are they provided by the Creator with that marvelous cluster of cutaneous nerve endings which so distinguishes them from any other part of his body? Why have we here those myriads of little nerve feelers brought right out in the papillæ of the skin, so that if free to do so, they would have actual contact with the earth as we walk on it? Was that provision made in vain? We must acknowledge that, if so, it is certainly the first of Nature's provisions which can be called so. Now, the latest advances of science on every side concede the fact that the nervous system is, to all intents and purposes, the electrical system. I, therefore, contend that our feet soles were designed to act as an electrical highway between our bodies and mother earth, and that the maintaining that highway in a free and unimpeded state is a matter of vital importance, not only to man himself, but to all other animals on earth.

It is so easy to multiply proofs of the absolute truth and importance of these facts, by practically relieving, as I have so often done, sufferers from various forms of sore feet—these being undoubtedly the first outward signs of Nature's protest against our violation of her laws—that volumes might be filled with their narration. Instead, thereof, let us endeavor to suggest a remedy. To this end I provide our ordinary shoes with an in-sole of good conducting material, with very fine wires invisibly fixed, so as to afford perfect electrical communication between this in-sole and the earth; so that a man in his ordinary footwear is caused, in an electrical sense, to literally walk barefooted on the ground, as he ought to do. The effect of this most simple attachment to shoes, as an immediate relief from cold feet in winter and from painful and swollen feet and ankles in summer, often amounts to almost a miracle. I have myself purposely worn rubber soled shoes until my eyes became sore as if filled with sand, and the pain in my feet soles was unbearable. I have then had attached the metallic earth connection as described, and at once all was changed; the shoes immediately became easy, not hurting my feet at all, and in a short time my eyes were again perfectly well.

In conclusion, I would put the question to the profession and laymen alike—for any man of intelligence is capable of fairly judging such a matter for himself—Is not my simple and rational plan, *viz.*, to give heed to and obey Nature's plain demands as to our feet soles, worth a fair trial?

Men of such universal and deserved fame on the subject of the nerves as Dr. Weir Mitchell, of Philadelphia, and Dr. Brown-Séquard, of Paris, have written as follows. The former says: "I have very little doubt that in some instances of local nervous disease the starting-point lies in the dermal nerve papillæ." Dr. Brown-

Séquard says: "The same peripheric cause of irritation, acting on the same centripetal nerve, may produce the greatest variety of effects, including every functional nervous affection or disorder." For the benefit of any reader unfamiliar with medical technicalities, we may be allowed to offer a free translation of these opinions. Both these experienced physicians here say that any nerve irritation —*i.e.*, any artificial or unnatural interference with ordinary nervous action or circulation in the outer skin or surface of some part of our bodies—is quite capable of producing serious disorders in any other, either external or internal, part, be it near to or far distant from that outer portion so acted on. Wherefore, that interference already described, with the natural nerve circulation between our feet soles and the earth—those soles being the most highly organized nerve surface of any in our bodies—may (and I contend does) produce in one person blindness, in another deafness, in another baldness, or cancer, or consumption of the lungs, heart failure, decayed teeth, rheumatism, neuralgia, or, indeed, any other unnatural or diseased state, in any other part or parts of our whole system, the organ affected differing in different subjects, simply because some are weak in one place, some in another, the particular location being determined entirely by the idiosyncrasies of constitution, the disease taking hold in each subject at his weakest point.

From well-understood physiological causes, the eyes are, perhaps, in all cases the first organs plainly damaged by insulation of the feet; but though they are more directly, they are no more surely, injured by it then other organs are in time.

As a ready test, and as a negative way of proving the benefit of earth connection, let any one interested try the following experiment: Paper is a good insulator. Take, say, three or four thicknesses of any common dry paper, say, newspaper, cut in-soles of it, and wear them daily in your shoes, taking care to renew them of fresh, dry paper daily. After four days, how does he feel? His feet soles are very painful, his eyes inflamed and sore, much as if dust had got under the lids, and altogether he is uncomfortable and feeling out of order. Now, this clearly shows that insulation is injurious, and this experiment is only assisting our shoes a little in that partial but destructive insulation which they inflict upon us every day we wear them. Though our teeth are more slowly affected, like other organs already alluded to, yet my experience goes directly to prove that electrical earth connection of the feet benefits the teeth as truly as it does the eyes. For in my own case, whereas formerly I was every now and again a great sufferer from toothache, since January, 1888, when I first adopted this plan, I have never had an ache or pain in my teeth, and they have neither required nor had any other treatment to acccount for this great change. I can say quite as much of my lungs. Formerly I was hardly ever clear a month at a stretch of a most annoying cough and wheezing, just as if I had been well started with asthma. Since the date named I have been entirely free from coughs or wheezing, and, indeed, from any bodily ailment.

While so much remains of uncertainty as to cause and effect in the nervous system, with an ever-increasing spread of nerve troubles among mankind, and while all will subscribe to the aphorism, that "prevention is better than cure," it is hardly too much to hope that anything novel on the latter lines, which may fairly claim an appeal to reason or common sense, should be welcomed and receive the fairest trial. That trial—a practical test of the benefit to the human system of electrical earth connection—is all that is necessary or desired.

—Quarrie, *N. Y. Med. Jour.*

THE PREVENTION OF MURAL ABSCESSES, SINUSES, AND VENTRAL HERNIÆ AFTER LAPAROTOMY.—*Mural Abscesses.*—Abscesses in the line of the abdominal incision, as we all know, are not necessarily dangerous, but they are attended with fever and pain on the part of the patient, and are a source of great anxiety to the young surgeon. And they help to make the track for a later ventral hernia, as is well known to the more experienced surgeon.

Can they be avoided? To answer this question we must remember that an abscess, in the vast majority of cases, is due to a disturbance of the blood and nerve supply, either directly or indirectly, or to a deposit of sepsis in the wound. The disturbance of blood and nerve supply as a cause of abscess, may require a word of explanation. A wound that is lacerated does not heal as quickly and as kindly as

a smooth-cut wound. The lips of the wound that are pulled apart by the fingers, and pressed hard upon with retractors, are injured much deeper. The blood-vessels and nerves are possibly wounded for a full half inch beneath the edge of the tissues. Consequently the vitality is low, and there is a disposition to form abscesses from direct death of a part of the wound; and in many cases this part of the wound is badly strangulated by deep sutures, which have been tied unnecessarily tight.

It is not safe or good surgery to tear up the tissue with the finger, separating the layers of the abdominal wall, making large or small pockets for the deposit of sepsis or blood-clots. Other things being equal, make a clean cut wound through the abdominal wall, and retract the edges of the wound with a proper, safe retractor, using care in this also; never hold the retractor too firmly, as I have often seen done, for ten or fifteen minutes, without once loosening the instrument, to allow a return of circulation in the lips of the wound.

Make a larger wound at first, rather than do any injury by too great pressure.

Sometimes, undoubtedly, the lips of the wound are severely injured by too much sponging with too hot water, or by using too strong germicide fluid. Avoid both sources of injury. Sometimes, too, the lips of the wound are seriously injured by the hand, in the vain effort to pass it into the abdomen through a too small incision, and later in an effort to deliver the tumor through this small opening. Because Mr. Tait has taught us to work through a small incision when we can, we must not suppose that he does not believe in a large incision, when necessary. We have often erred in applying his rule for special cases to all of our cases.

Make the incision large enough to enable you to work intelligently and without difficulty in the pelvis, and without injury to the lips of the wound while the hand is in the pelvis.

The question of sepsis at the time of the operation is one, however, not to be overlooked. Undoubtedly, many an abscess is caused by the direct deposit of sepsis in the edge of the wound.

Make sure that the hands, instruments, sponges, towels, and all outer garments which can possibly be touched during the operation, are absolutely aseptic.

The patient should be made clean, the pubis shaved, and a moist bichloride dressing should be kept over the abdomen for twelve hours before the operation. This last suggestion is too often overlooked. I believe it to be important. No iodoform or aristol collodion dressing is needed to cover the wound when a sterilized cotton dressing is used. Another source of sepsis is the dressing, which is often allowed to remain too long over the wound before it is changed. We have not yet found a perfect dressing—one which we can safely trust on a wound of the abdomen for six days without removal. Even a biniodide of mercury dressing, which we all had hoped would be perfect in this respect, is far from an ideal dressing. We have often removed it after three days, and found underneath an abundant crop of pustules, some quite deep and large. I know of no germicide dressing which it is safe to keep *in situ* over the wound for six or eight days without inspection. We must not practise and teach that a dressing can remain for six days without changing. It is far better, if we wish to avoid mural abscesses, to remove the dressing, of whatever sterilized material is used, on the third day, and wash the wound with a warm germicide fluid, and apply another sterilized dressing, doing this every second day, until the time to cut some of the sutures has arrived. And, furthermore, we should apply a moist bichloride dressing to the wound for full two hours before cutting the sutures. In other words, under no circumstances introduce sepsis as you withdraw a suture which is not absolutely aseptic. Sutures must be made aseptic before cutting and removing. Our abscesses which appear after the eighth day have almost always been caused by this carelessness.

The selection of needles and suture material, and the manner of introducing the needle, may also, undoubtedly, be a cause of abscess.

Use a needle which will pass easily through the abdominal wall. I do not think, in abdominal surgery, that the shape of the wound which the needle makes is of great advantage. The rules to follow are to have a sharp needle in all cases, a long and strong needle in thick-walled cases, and not a large needle in

any case. A few Keith or Skene fine trocar-pointed needles, each carrying a sterilized suture of silk, or silkworm gut, will be the ideal needle to use in passing sutures through the abdominal wall, when the edges can be easily raised and everted. But if the wall is tense and the wound small, a stronger, slightly-curved Hanks-Peaslee needle will serve best, or a slightly-curved Hagedorn needle may be used. I have found silkworm-gut easy to use with this handled needle, and my assistant threads the needle instantly after its passage through the wall on his side. Silkworm-gut or silver is best for holding the different layers together. I have found the sharp two-inch, round-pointed, slightly-curved needle best for the peritoneum. For the fascia a sharper, stronger needle should be selected. I make these suggestions because I believe that unnecessary punctures are often made with poor needles—needles not adapted to the work in hand—and I believe every puncture, especially with a large needle, is an additional source of irritation. Too many surgeons are not good mechanics, and they expect to do all the work in the different abdominal wounds with needles of the same length and size. In very stout patients, when the adipose tissue is two and a half inches or more in thickness, it may be well to close only the peritoneum, muscle, and fascia, and leave the adipose tissue and integument to heal slowly by granulation, as recommended by Dr. Pryor.[1] By this way Dr. Pryor seeks to avoid the mural abscesses which are so liable to occur in every stout woman. I have never tried this plan primarily, but I have always practised a similar procedure in closing the sinuses caused by drainage-tubes and mural abscesses. I believe it a wise suggestion to follow in stout women, and shall certainly follow it in the future.

To recapitulate: In trying to avoid mural abscess—

1. Make a clean-cut wound, and not a lacerated wound;

2. Do not separate the different layers unnecessarily;

3. Do not retract the lips with too much force or for too long a period;

4. Do not use too hot water, nor too strong germicide on lips of wound;

5. Have the abdomen aseptic by keeping a germicide dressing on abdomen for twelve hours before operating;

6. Do an aseptic operation;

7. Make no unnecessary punctures with needles;

8. Do not strangulate wound with too tight sutures;

9. Under proper aseptic precautions, remove the sterilized dressing every two days, wash with warm germicide fluid, and redress as before;

10. Before cutting sutures, have the patient wear a moist bichloride dressing for two or more hours. Be sure no sepsis is on any suture before removing it.

Sinuses in Track of Drainage Tubes.—These accidents, like mural abscesses, are not dangerous, but they trouble our patients longer and humiliate the surgeon beyond expression. I believe they can be avoided.

1. Never use a drainage tube when not needed.

2. Never allow one to remain *in situ* for over twenty hours without drawing it upward a third or half an inch, and fastening it in its new position.

3. Entirely remove it on the third day, unless purulent matter is withdrawn on that day, or the case is one of tubercular peritonitis. A little serum will do no harm if it is allowed to remain in the cavity.

4. Insist upon much more care being exercised by the house surgeon or nurse in clearing the tubes. They must be kept sweet and aseptic.

5. Always have one loose suture untied in the track of the tube, which is to be tied as soon as the tube is removed and the parts thoroughly cleansed.

Ventral Hernia.—This accident is far more frequent than many suppose. They do not all occur alone in the practice of the inexperienced operators. Some of our most brilliant operators find that there is a large per cent. of patients with ventral hernia if they examine them after two years. I have been called to operate for this distressing accident five times in three months during the last year. These patients had been operated upon by four different gynæcologists. One patient only had been operated upon by myself. If I

[1] *Medical Record*, September 19, 1891.

have seen five cases in three months, what must be the number seen by all the other gynæcologists in New York City alone during the year. During the last few years in the Cripples' Hospital in New York, fifty patients, from among the poor, have applied for suitable trusses or supports for ventral hernia following laparotomy. The cause of ventral hernia is, of course, the giving way of the muscle and fascia in the line of the wound. I believe we can prevent the accident.

I know, and many of you know, how very infrequently the peritoneum, the muscle, and the fascia are brought into exact apposition during an operation. I have seen this done so slovenly that nothing short of a miracle could prevent a hernia. Many and many a time, when a deep wound is being closed, the peritoneum on one side is allowed to slip up between the fascia, thus paving the way for an early rupture. To avoid this accident, and for other reasons, Ségond favors vaginal hysterectomy, as in that case there is no abdominal cicatrix.[1]

Pozzi[2] and a host of others advocate suturing the wound in layers to reduce the possibility of hernia in the abdominal cicatrix to its minimum proportions. The drainage tube is far less likely to be the cause of the hernia. When a large one is used, possibly it may be an exciting cause, but generally it is surrounded by plastic material, and no portion of the intestine can get in position to work through the artificial canal. The cause, therefore, is due to the inexact way in which the different layers are brought together, or to the weakness which has resulted from an abscess in the wound at the point of union of the fascia. The rule to be adopted and followed in all cases is to bring the peritoneum together with very fine continuous catgut sutures, then the muscle and fascia in like manner, making sure of the muscle as well as the fascia. No wound is safe unless the fascia is strong. Whatever plan you may adopt for the adipose tissue and integument, the peritoneum, and especially the muscle and fascia, must be treated as above described if the danger of hernia is to be reduced to a minimum. A good course to pursue is to keep the different layers together by inserting two deep sutures of silkworm-gut first, and allowing them to remain loose until the fine catgut, suturing in the peritoneum and fascia are each, in turn, completed; then by gently tightening these deeper sutures, bring the different layers in apposition. Do not draw these deeper sutures too tightly, or there will be strangulation of the deeper tissues. If you are sure of your catgut you can do all the work with it. Certainly not more than two deeper silver or silk or silkworm-gut sutures are needed. I do not insist upon any one plan for closing the wound. I only insist upon bringing each layer in exact apposition with its fellow in regular order in the most exact and improved manner. The annoyance and distress of some of these women suffering from a monstrous hernia cannot be exaggerated. We ought to be willing to give five minutes extra time to a scientific suturing of the abdominal wound in order, if possible, to prevent an accident so serious to the patient and so humiliating to the surgeon.—Hanks, *Med. Press.*

[1] Abstracts in *Am. Jour. Obstet.*, August, 1891, p. 1010.

[2] *Am. Jour. Obstet.*, August, 1891, p. 1014.

Important Facts in the Theory of Inflammation.—The Bowman lecture of the Ophthalmological Society was this year delivered before a numerous audience by the distinguished Professor of Ophthalmology at Heidelberg, Theodor Leber. For many years past Professor Leber has been engaged in working out the pathology of the inflammatory process, which can nowhere be studied to greater advantage than in the cornea; and it is not surprising that he took that subject for his theme, and presented to his hearers, in a condensed form, the contents of the large and important work he published a few months ago, the chief points in which we recently translated for the benefit of our readers. After a brief but appreciative reference to Sir William Bowman, and to the loss sustained by the profession by his death, Professor Leber acknowledged at once that we are indebted to Sir Joseph Lister for the proof that the purulent inflammation following an injury is caused by inoculation of micro-organisms within the wound. Further inquiry has led to the discovery that their capability to give rise to inflammation and to disease in general depends upon the production of certain poisonous substances which, in infinitesimally small quantities, are able to cause inflammation

and necrosis of the tissues of the body; whilst, on the other hand, the presence of an inert foreign body, introduced antiseptically into the tissues, leads to no inflammation whatever. Nowhere can this be more clearly shown than in the eye. If a small piece of gold or glass be introduced through a slight wound, with due antiseptic precautions, into the anterior chamber of a rabbit's eye, no inflammation is excited, no pus is found, and this foreign body may continue visible for months, or even years, either in the aqueous or in the vitreous, which remain unclouded. From this fact it was easy to draw the conclusion that suppuration is only produced by the specific action of micro-organisms. Unfortunately, however, further experiment soon presented stubborn facts which militated against this theory; for a single drop of mercury, rendered absolutely sterile by heat, antiseptically introduced into the anterior chamber of the eye of an animal, always gives rise to a circumscribed collection of pus in its immediate neighborhood, which is distinguished from that which is produced by micro-organisms by the entire absence of microbes, which can be shown by the microscope, or which can be obtained by culture experiments. But mercury is not the only substance that can induce suppuration. Metallic copper is equally potent, though Professor Leber has observed remarkable differences in the effects produced, according to the part which may happen to come into relation with the metallic fragment. Should it rest either on the iris or inner surface of the ciliary body, suppuration will certainly be produced; whilst a similar fragment produces no pus when situated in the lens, where it does not even produce complete opacity. The reason of this difference, he shows, lies in the fact that the fragment of copper, when situated in the lens, is completely enveloped by a thick coating of albumen, which effectually prevents it from exercising its irritating chemical action. On the other hand, when in contact with vascular tissues copper immediately acts upon the vessels, an effect that is probably due to the copper being dissolved by the fluids of the eye, on which fact its power of provoking inflammation depends. One of the commonest causes of suppuration—the staphylococcus aureus—readily furnishes proof that its action depends upon chemical substances, for if a pure culture be perfectly sterilized the fluid containing them can still produce an intense purulent inflammation when injected into the anterior chamber.

The study of septic inflammation of the cornea shows that the action of the micro-organism extends far beyond the area of its development, so that, as Professor Leber remarks, a sort of distant action must take place. The lecturer then proceeded to describe the keratitis caused by inoculation of micro-organisms. He took the case of a microbe developing in the center of the cornea, and showed that the effect in the area directly attacked consisted only of retrogressive changes in the cells, ending in necrosis. At first, if the action of the microbe is sufficiently intense, neither migration of the leucocytes nor proliferation of the cornea cells takes place, but after a time there appears a zone of dense infiltration of pus corpuscles—which are in reality white blood corpuscles—which affect more or less the entire thickness of the cornea. This is due to the disposition of the leucocytes to move toward the place of the greatest concentration of the exciting substance; but as they are making their way toward the microbic area, stimulated to movement by the slighter concentration of the poison, they fail to reach it, because, whilst still at a distance, their movements are paralyzed through the intensity of the toxic action, and the cells have perished. We thus find an explanation of the central necrosis in cases of septic inoculation of the clear ring which surrounds this area, and which is saturated with the poison, and of the opaque, purulent area formed by dead leucocytes.

—*The Lancet.*

FORMULÆ: *Hair Tonic.*—The writer recommends the following lotion for the scalp in such cases as thinning of the hair, where no cause is apparent, and the patient insists on having a "hair tonic:"

℞.—Fluid extract jaborandi..... f℥j.
Tincture cantharides..... f℥j.
Sulphate of quinine..... ℈j.
Glycerine..... f℥ij.
Bay rum.....q. s. ad f℥xvj.
Mix. Rub into the scalp every night.

—J. C. Falk, in *The Med. Fortnightly.*

Difficult Digestion.—A favorite prescription of the out-door medical department of the Jefferson Medical College Hospital, in cases of difficult digestion accompanied by constipation and flatulency, is the following:

℞.—Tincture nucis vomicæ,
Tincture belladonnæ,
Tincture physostigmatis..... āā f℥ij.
Extract cascaræ sagr..... f℥vj.
Extract erythroxyli fl.....q. s. ad f℥iij.
M.—Sig. A teaspoonful after each meal.

—*Ib.*

In vomiting of pregnancy Dr. Frank R. Fry has found the following formula very serviceable:

℞.—Cocain. muriat..... gr. vj.
Cerii oxalat..... gr. xxiv.
Glycerine,
Aqua laurocer.....āā ℥iij.
Aqua destil.....q. s. ℥iij.
M. ft. mist.
Sig. One tablespoonful (taken cold) every two hours, to once or twice a day, pro re nata.

—*Ib.*

In constipation due to torpor of liver and bowels the following is of great meri t:

℞.—Pulv. rhei..... gr. xij.
Pulv. aloe..... gr. vj.
Extract bellad.,
Extract nucis vomicæ.....āā gr. ij.
M. ft. pil. No. xii
Sig. One after each meal.

Robinson—*The Med. Fortnightly.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. Bing, M.D., Chester, Pa., Translator).

Employment of Solanine in Affections of the Stomach with Neuralgia (Desnas).—Solanine is a product of the various species of the order solanaceæ. It occurs as a yellowish-white substance, insoluble in water, and depositing from a hot alcoholic solution very fine, needle-shaped crystals, showing under the microscope as rectangular prisms. It is found principally in the green sprouts and skins of the potato, although it comes in other plants of the order. It is now generally regarded as a glucoside, being split up in the economy into glucose and solanidine. Experiments on animals with solanine show that it acts on the medulla oblongata, spinal cord and nervous trunks, giving rise to analgesia of the terminal sensory nerves, to paresis in the motor nerves, and exercises, secondarily, a depressing effect on the brain.

These qualities have led to its use in various neuralgias.

The author's observations numbered nineteen; two of these cases were left out of the account, as they were malingerers of the seventeen remaining cases; he reports four failures and thirteen successes.

The failures were two cases of gastralgia, one of gastritis (chronic), one of cramp of the stomach following acute inflammation. The favorable cases comprehended a few simple gastralgias; gastralgias occurring in the course of pelvic peritonitis (with abscess discharging into the rectum); gastralgia supervening in the course of uterine congestion, following delivery, and complicated with ileo-lumbar neuralgia; neuralgic dyspepsia, due to exhaustion from prolonged nursing, and to dyspepsia with cramps from undigested food. Other cases were due to alcoholic excess, gastric ulcer, pyloric cancer, etc. The best form of administering solanine is as pills of 5 cgms. each, given one-half to one hour before meals.

—*Bulletin Gen. de Therapeutics.*

For Writing on Glass.—Dissolve 36 grammes of fluoride of sodium and 7 grammes of sulphate of potash in 500 grammes of water; also dissolve in 500 grammes of water 14 grammes of chloride of zinc, and add 65 grammes of hydrochloric acid when wanted for use. Mix equal parts of the solutions, and use with pen or brush.—*Journal des Invent.*

Lycopodium in Continence of Urine.—Introduced as a new treatment by Fenevich in 1887, it was neglected till lately, when Green (of Ireland) began to use it with good results. The theory for its use is obscure. According to Green, it anæsthetizes the mucous membrane of the bladder and tones up the sphincter. In one case, where catheterization was very painful, there was no difficulty after the use of lycopodium.

The sporules of the mass being insoluble, must be first rubbed with sugar of milk before maceration in dilute alcohol. The dose of the tincture (strength not stated) varies from three to forty drops three or four times a day.

PARACRESOTATE OF SODA—A NEW ANTISEPTIC FOR INTERNAL USE.—Paracresotic acid is a new derivative of paracresol, obtained by the combination of carbonic acid with the latter body in presence of sodium. Paracresol, or paracresylol is one of a group of cresols, or cresylols, which contains three isomers, ortho, meta and para-cresol. By the above reaction all these bodies may fix under the same conditions a proportion of CO_2 and give rise to a creosotic acid. These acids (meta, ortho, para-cresotic) are the higher homologues of salicylic acid: $C^7H^6O^3$, in which an atom of H is replaced by the group CH_3. Pancresotic acid has been obtained by Kulbe and Lauteman by passing through paracresol, gently heated, a current of CO_2, then adding fragments of sodium. There is formed along with cresolate of soda cresylcarbonate, which is decomposed by HCl into cresol and cresotic acid. This is purified by several successive manipulations. Paracresotic acid occurs as white, acicular, brilliant crystals, soluble in hot water, ether, alcohol and chloroform. Salts of iron give a violet color, as with salicylic acid.

Therapeutically, the pancresotate of soda has been employed. It is a very fine crystalline powder, of a bitter taste, but not unpleasant, soluble in 24 parts of tepid water, and remaining in solution when cool. Paracresotic acid is of the three isomers the most active and the least dangerous, the meta variety determining paralysis of the heart. According to Demmé, paracresotate of soda produces in warm-blooded animals softening of the pulse, lessened number of respiratory movements, and lowered blood pressure. It has been prescribed as an antipyretic and internal antiseptic. It has been given in rheumatism, with results resembling those of salicylic acid. It is quite useful in intestinal infection, in typhoid fever and gastro-intestinal catarrh of nurslings. Its action also resembles that of resorcin. For the diarrhœa of infants, Demmé uses :

℞.—Paracresotate of soda...	0.10 to 0.20 cgms.
Tinct. opium.....	2 to 4 gtts.
Cognac.....	1 grm.
Syr. gum arabic.....	5 grms.
Dist. water	25 grms.

A teaspoonful every two hours.

—*Le Progress Medicale.*

TREATMENT FOR HYPERIDROSIS, ESPECIALLY OF THE FEET (SWEATING FEET) (Brocq).— 1. *Naphthol.*— Apply twice daily a mixture of naphthol, 5 parts; glycerine, 10 parts; and alcohol, 100 parts; then powder with starch, pure or mixed with naphthol, with pads between the toes.

2.

℞.—Permanganate of potash..	1 grm.
Thymol.....	.30 c. grms.
Dist. water.....	100 grms.

Wear soles made of paper, felt or muslin, soaked in this solution and then dried. Change them every day, and powder with a preparation containing permanganate.

3. Salicylic acid, quinine, tannin, preparations of iron, may all be employed, either dry or liquid.

A MEANS OF RESUSCITATION OF THE APPARENTLY DROWNED (Labord).—This means is to be used in conjunction with the ordinary methods. It consists in seizing the tongue, and making energetic, backward and forward movements, causing powerful action and excitation of the base of the tongue, and producing reflex respiratory action. This simple expedient has succeeded even after immersion of twenty-five minutes duration, and after the usual methods had failed.

—*La France Medicale.*

ABORTIVE TREATMENT OF ERYSIPELAS OF THE FACE BY "SUBLIMATED" ETHER SPRAY (Talamon).—Talamon thinks it possible to hinder the march of erysipelas by this procedure. He has had several successes with it, and believes it an excellent abortive in the affection. He follows the subjoined plan. A solution of sublimate of ether, 1 per cent.; to use it in a hand spray apparatus of small size; to consider the duration of each application and the force of the jet; the fineness of the patient's skin; the depth of the infiltration; the existence of bullæ; to not fear vesication; to provoke it boldly by prolonging the spraying if the inflammation is of small extent; to spray the center of the spot more than the periphery, and to apply it to the forehead to prevent the inflammation spreading towards the scalp; to cover the face with boric compresses kept wet. On the body and limbs the spraying may be stronger and longer; to warn the patient that the dressing will be somewhat painful; that the face may

become swollen, and that the application may produce some scabs; to be careful not to detach the scabs, but to allow them to fall off under the dressings.

(Some practitioners, among them Guyot, have tried this plan without success).

—*La France Medicale.*

CLINICAL AND BACTERIOLOGICAL RESEARCHES ON THE MUD DEPOSITED IN THE "CHAMBERLAND" FILTER (Lacour).—In normal conditions the filter furnishes sterilized water if certain precautions are observed. The water pressure is of importance. Under a pressure of forty-five pounds the germs commence to pass through by the third day, and by the fifth day a pressure of thirty pounds (two atmospheres) is sufficient. At fifteen pounds pressure the water is sterile; the author has proved the above facts by experiment, and in his opinion, to avoid danger, the pressure should not go above fifteen pounds, and the bougies (filter tubes) should be thoroughly cleaned every two or three days, especially so if a greater pressure is used.

—*Revue Gen. de Medicine Chirurg.*

AT the meeting of the Nantes Medical Society of May 30, Dr. Desormeaux reported a case of congenital imperforation of the uterus in a patient of seventeen years, who had never menstruated, and had suffered greatly each month since the age of fourteen. She had epistaxis every two or three months with great relief. At sixteen she had pelvic peritonitis.

Vulva and vagina normal; uterine neck thick and long; body easily felt above pubes.

Not knowing whether or not there might be commencing pregnancy, Desormeaux at first used warm irrigations and baths, but the following month he discarded the idea of pregnancy and made a local bleeding which gave relief. Catheterism of the cavity was practised, the instrument was arrested at the depth of 4 cm., not penetrating beyond the neck, the obstacle was not caused by a bending, the direction was normal. He resolved to make an incision, and did so antiseptically. He cut through a hard resisting tissue, which was 5 to 6 mm. thick; the operation was finished by dilating. The uterine cavity, enlarged towards the fundus, measured 10 cm. After a few days another dilatation was made, and since then the girl has been regular.

—*Gaz. Med. de Nantes.*

News and Miscellany.

DR. C. C. TERRY, of Fall River, died in that city on July 18, from a wound received in fencing. The button on his adversary's foil broke, and the weapon pierced his eye and entered the brain. He almost immediately lost consciousness, and died in about three hours. Dr. Terry was a graduate of the Harvard Medical School, and was fifty five years of age.

—*Med. Record.*

THE editor of a southwestern religious paper recently received the following letter:

"DEAR SIR:—When my subscription expires, I desire to stop taking your paper. The only practical article it has had for the last six months is a recipe for getting rid of red ants, and on making a trial of it, I find that it is no good. A paper that gives bad advice about red ants may be just as far off the track in its theology, and it ain't worth a blame to me."

—The Radford, Va., *Enterprise.*

If the reader was thus disappointed in the "ant" recipe, how would he feel when he had tackled some of the patent medicines so freely boomed by the religious frauds?

THE COMPOSITION OF DR. BROWN-SÉQUARD'S GLAND JUICE.—At the last meeting of the Académie des Science, M. Gautier announced that Professor de Poehl, of St. Petersburg, had succeeded in extracting from the pancreas, thyroid body, ovaries and testes, a leucomaine called spermine, having the composition represented by the formula $C_5H_{14}N_2$, which he has isolated in the form of crystallized phosphate. A few centigrammes of this base, introduced subcutaneously in the form of hydrochlorate, is said to produce the tonic and exciting effects of Dr. Brown-Séquard's injections, and the discoverer believes that it is to spermine alone that the remarkable results obtained by these injections are due. It appears that spermine possesses great oxidizing power, it being capable of rapidly converting, in the presence of gold or platinum chloride, magnesium into magnesia. Under its influence also, the nitrogenous extractives of urine are converted into urea. It is pointed out that in Germany spermine is confounded with piperazine, the latter substance being sold for the former.

—Paris correspondent of *The Lancet.*

AN ELECTRICAL FINGER.—It is said that an electrical finger for surgical uses has recently been invented. A bulb, attached to a long probe, is attached to a finger stall. The bulb is double and the outer skin is flexible. The two layers are connected with opposite poles of the battery, and wires connect the inner layer with the finger tip. Pressure at any point closes the circuit, and the electrical current is transmitted to a corresponding point on the finger. The surgeon has thus a means of feeling and measuring things which he can neither see nor reach by ordinary means.

WEEKLY Report of Interments in Philadelphia, from July 16 to July 23, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess of rectum	1		Fever, scarlet		3
" lung	1		" typhoid	4	
" brain	1		Gangrene of foot	1	
Abscess, ovarian	1		Hemorrhage	2	2
Aneurism of the aorta	1		Inanition	1	20
Alcoholism	4		Inflam'n bladder	2	
Apoplexy	8		" brain	3	7
Anæmia		1	" bronchi	5	3
Bright's disease	6	2	" kidneys	9	
Burns and scalds	1	1	" heart	1	
Cancer	14		" mouth		2
Casualties	9	2	" lungs	6	10
Congestion of the brain		7	" peritone'm	4	1
Congestion of the lungs	1	1	" s. & bowels	8	21
Cholera infantum		124	" tonsils	1	
" morbus	6	1	Influenza	1	
Cirrhosis of the liver	2		Intussusception	1	
Consumption of the lungs	34	6	Locomotor ataxia	1	
Convulsions		18	Jaundice		1
" puerperal	1		Marasmus	1	38
Cyanosis		3	Measles		2
Debility	2	3	Obstruction of the bowels	4	
Diabetes	1		Old age	9	
Diarrhœa	6	3	Paralysis	5	
Diphtheria		19	Psoriasis		1
Disease of the spine		1	Pyæmia		1
" " heart	9	3	Rheumatism	1	
" " uterus	1		Shock, surgical	2	
Drowned	3	1	Sclerosis	1	
Dropsy	4		Septicæmia	3	
Dysentery	11	1	Suffocation	1	
Effusion of the brain		1	Suicide	4	
Epilepsy	1		Sunstroke	1	
Erysipelas		1	Syphilis	1	
Embolism of femoral artery	1		Tabes mesenterica		2
Extra uterine pregnancy	1		Teething		5
Fatty degeneration of the heart	2		Tetanus	1	
Fatty degeneration of the kidneys	1		Tumor	2	
Fracture of the femur	1		Ulceration of the bowels	1	
			Ulceration of the stomach	1	
			Whooping-cough		4
			Total	224	322

OF THE FOREGOING THERE WERE:

Under 1 year	232	From 40 to 50	34
From 1 to 2	38	" 50 to 60	32
" 2 to 5	20	" 60 to 70	36
" 5 to 10	15	" 70 to 80	34
" 10 to 15	10	" 80 to 90	13
" 15 to 20	7	" 100 to 110	3
" 20 to 30	39		
" 30 to 40	33	Total	546

WARDS.		WARDS.		WARDS.	
First	33	Thirteenth	10	Twenty fifth	25
Second	12	Fourteenth	8	Twenty sixth	35
Third	12	Fifteenth	26	*Twenty se'h	44
Fourth	9	Sixteenth	16	†Twenty ei'th	28
Fifth	10	Seventeenth	11	Twenty ninth	25
Sixth	4	Eighteenth	10	Thirtieth	14
Seventh	20	Nineteenth	33	Thirty-first	21
Eighth	8	Twentieth	16	Thirty second	9
Ninth	6	Twenty first	4	Thirty-third	18
Tenth	6	Twenty second	17	Thirty-fourth	12
Eleventh	7	Twenty third	10	Thirty-fifth	3
Twelfth	12	Twenty fourth	12		

Total 546

*Includes deaths in Almshouse.

†Includes deaths in Municipal Hospital.

Nativity—United States, 428; foreign, 113; unknown, 5; people of color, 46; premature birth, 11; still born, 28.

Males, 289; females. 257; boys, 170; girls, 152.

The number of deaths, compared with corresponding week of 1891 and of last week, was as follows:

Week ending July 25, 1891, was 547.

Week ending July 16, 1892, was 577.

By order of the Board of Health,

MOSES VEALE,
Health Officer.

Attest:
J. V. P. TURNER,
Chief Registration Clerk.

ARMY, NAVY AND MARINE HOSPITAL SERVICE.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from July 10 to July 23, 1892.

Leave of absence for one month, with permission to apply for an extension of one month, is granted Colonel Charles Page, Assistant-Surgeon General, U. S. Army.

In addition to his other duties Major J. V. D. Middleton, Surgeon, U. S. Army, will take charge of the office and perform the duties of the Medical Director, Department of the East, during the absence on leave of Colonel Page, Medical Director.

By direction of the Secretary of War, Lieutenant-Colonel Charles R. Greenleaf, Assistant Medical Purveyor, U. S. Army, will proceed at the proper time to Montpelier, Vermont, and visit the camp of the Vermont National Guard during the period of its encampment, commencing August 23, 1892.

The leave of absence granted Major C. E. Munn, Surgeon, U. S. Army, for seven days, is hereby extended thirteen days.

Major J. K. Corson, Surgeon, U. S. Army, granted leave of absence for one month, to take effect on or about August 2, 1892, provided Capt. W. B. Banister, Assistant-Surgeon, U. S. A., shall have returned from leave of absence, with permission to apply for an extension of one month.

Major John O. Skinner, Surgeon, U. S. Army, granted leave of absence for four months on account of sickness, with permission to leave the Department of Texas.

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Vol. XXV. No. 6. PHILADELPHIA, AUGUST 6, 1892. Whole No. 726.

PAGE

ORIGINAL ARTICLES:
A Talk on Subjects Relating to Parturition. By Dr. Mary A. Dixon-Jones - - - - - - - - 159
A Case of Labor With Unusual Multiple Complications. By G. W. Kemper, M.D. - - - - 164

EDITORIAL:
Obstetrical Number - - - - - - - - - - - 167
Spread of Cholera - - - - - - - - - - - - 167

LETTERS TO THE EDITOR:
Retroversion in Pregnancy. *Dixon Jones* - - - - 167
A Case of Puerperal Amaurosis. *McGillicuddy* - - 169
An Obstetric Curiosity. *Dimon* - - - - - - - - 169

PAGE

SPECIAL ARTICLE:
Why Women Do Not Become Mothers, or Causes of Sterility in Women. By Mary A. Dixon Jones - - - - - - - - - - - - - - - 170

THE MEDICAL DIGEST:
Pregnancy and Goitre (*Joffroy*)—The Importance of Examination of the Genital Tract Directly After Labor (*Duke*)—A Piece of Dentistry (*Thompson*) - - - - - - - - - - - - - - - - - 184–185

MEDICAL NEWS AND MISCELLANY - - - - 185

ARMY, NAVY, AND MARINE HOSPITAL SERVICE - - - - - - - - - - - - - - - - - 186

NOTES AND ITEMS - - - - - - - - - - iv, vii

Original Articles.

A TALK ON SUBJECTS RELATING TO PARTURITION.

By DR. MARY A. DIXON-JONES.

OBSTETRICS, as a branch of medical science, is a most interesting and fascinating study. As to the practice, not so much can be said, because, first, we cannot fix the day or hour, as we can for an ordinary surgical operation; second objection, the length of time usually required; third, the call invariably comes when it most sadly deranges other work; fourth, women usually select near midnight as the preferred period, thereby depriving a physician of his necessary sleep and strength for the labors of the morrow. Thus obstetrics becomes the most objectionable part of medical practice.

Most cases of accouchement are normal, natural and easily managed, yet, as I, on one occasion said to a woman physician, no one should enter the parturient chamber, unless he or she is prepared and ready for any emergency. Even in the simplest cases there is a certain routine and care that require the most thoughtful management, often demanding as good and clear judgment as the most trying perplexity. Without a thorough regard to cleanliness and purity, there may be septic conditions induced that will cause lasting trouble. Through abrasions in the mucous membrane, and, especially, from slight lacerations of the cervix, sufficient poison may be introduced to cause metritis, peritonitis, salpingitis or oöphoritis. To this many women date the commencement of their ill-health, their sufferings and their sterility. In an untold number of instances, women have one, two, or three children, with prospects and capabilities of having a large family, but some sepsis is introduced, almost imperceptibly, and, possibly, from some unknown cause; but, in consequence, there may be inflammatory action sufficient to destroy the most vital parts of the genital organization, as the celia or mucosa of the tubes, or the delicate ova of the ovaries, and thereby the woman is rendered forever incapable of having any more children. This is often the case. Many have thus been made sterile and invalids for life. In an article of mine, published in the *New York Medical Journal*, May 10 and 17, 1890, I remark: "Around and with a parturient woman there should be as aseptic conditions as for an operation. I have sometimes thought that an obstetrician should be an antiseptic surgeon, for often at that time are induced those conditions which not only make a woman a life-long sufferer, but make her sterile. Frequently, in taking the medical history of a patient, we find that she had in quick succession one, two, or three children, and none since. As a patient said to me: 'I had one child ten months after marriage, and the seven years since have been years of sickness and misery.' Here was a woman of good constitution, capable of being the mother of half a dozen or more

children and still have good health, instead of which now, at the age of twenty-six, is an invalid '*et une femme stérile*;' all from sepsis at confinement."

This is a sad history; but we find it repeated almost every day. Ignorant, untrained and uneducated midwives are allowed to attend women at this most important and interesting period. One midwife I know of; at one time she was a patient in the hospital where I was surgeon; naturally a sickly woman, and after her operation and return home, she became still more infected with gonorrhœa; and, besides, she was a woman who had not the natural refinement to care for the sick, or sufficient of the milk of human kindness to deal gently with the suffering. Yet this woman, with her short comings, with this source of infection, commenced, without any knowledge or previous preparation, to be a midwife. Who knows how many women through her have been made sick, how many have been rendered invalids, or how many have been laid away in their graves! It would be a sad reckoning. In an article in the *Medical Record*, published August 28, 1892, I say: "Various micro-organisms are often introduced by unclean fingers, instruments, etc., especially after confinement, when there are abrasions and tears in the cervix and the uterine mucosa is as yet destitute of the protecting epithelia at the previous site of the placenta. This is especially the source of much trouble, as so many ignorant and uncultivated women assume the duties of midwife, many of whom have not the least idea of purity or surgical cleanliness."

Physicians of refinement and education, without thinking of sepsis or antisepsis, are naturally cleanly. That is sufficient—the sum of all antisepsis is cleanliness, and many of them, like the eminent Hiram Corson, of Pennsylvania, run up their thousands of labors all brilliantly successful, because each one was managed scientifically, and with common sense. These physicians are unconsciously great antiseptic surgeons.

Even an ordinary examination should not be made without perfect asepsis or cleanliness. Physicians understand this, and use great care, especially in going past the external os, or when entering the uterine cavity for examination, or to deliver a placenta, or for any purpose. Probably a safe plan after all such procedures is to give the uterine cavity a good washing out with warm water that has been boiled. Neglect in this respect, or lack of perfect cleanliness, means at least days of weariness and half sickness for the young mother, and if septic material is introduced into this large absorbing surface, this newly-made wound, so rapidly is the infection taken and spread, that in less than six hours the woman may be dangerously ill, and even if her life is spared, there is a tedious convalesence, and possibly a life-long invalidism.

These are serious considerations and the vast mortality in childbirth tell the sequel.

Washing out the uterus, not with chemicals, but with pure water, will be found a safe procedure; may be done without difficulty; without pain or discomfort, and in most instances seems to give immediate relief. I had once a most difficult labor. It was the first child. During the pregnancy the woman had been very much bloated from an incipient catarrhal nephritis. The child was delivered with instruments. The next day the woman was sick; high temperature; rapid pulse, and all the indications of peritonitis or child-bed fever. I gave the uterus a thorough washing out; the fever at once subsided; the pulse abated; the patient immediately showed better conditions, and had a rapid convalesence. She has since passed through several normal labors. I believe but for the cleansing of the uterus out, or something equivalent, the patient would have had a tedious sickness, and the consequent inflammatory action around the uterine appendages might have given trouble, or have rendered her sterile.

On one occasion I was called to see a woman who had been confined three days previously. She had offensive lochial discharges, with scepticemia and peritonitis. I thoroughly washed out the uterus, intending to curette if necessary; next morning the washing was repeated. This seemed to allay the fever and the restlessness, and there was no further trouble. The lochia, the blood, or a portion of the placenta, or any *débris* retained in the uterus may cause sepsis.

When my son, Dr. Charles N. D. Jones, was interne or house surgeon in the Brooklyn City Hospital in 1884, he called late one night to tell me of a woman, who, after confinement, had such septic conditions that there was little hope of

her recovery. I advised him to give the uterine cavity a thorough washing out with an abundance of warm water. He did so once or twice, the woman immediately improved and made an excellent recovery. He in a similar manner saved other cases in that hospital that were apparently equally hopeless.

What is to be done if during labor the patient's strength fails and all pains cease? Must we urge on tired nature and force the uterus to act, and deliver against all indications? Is it not better, if labor is not too far advanced, to let nature recuperate, gain strength, and gather up her forces? I was called early one morning to a patient; the pains were quick and rapid, and apparently all would soon be over. Gradually the pains decreased in length and power, and became less frequent, till they had nearly ceased. The woman was feeble and exhausted. She was a tired, overworked woman. I ordered ¼ grain morphine suppository and left the patient to rest. She slept all day, and was refreshed. At ten that night I was sent for, a normal rapid labor, no untoward circumstance in any way.

Malpresentation.—In the mechanism of labor, probably of all presentations the one most to be feared and dreaded is the transverse or shoulder presentation. According to statistics it occurs about once in 260 cases, and one to nine of the mothers live, and half the children are lost.

This malposition is most frequently caused by a superabundance of the amniotic fluid. A young woman whom I had attended in her first confinement called on me to attend her a second time. I examined her, there was a head presentation, and every thing was all right. At the time of labor she sent for me. It was towards evening. As I entered her chamber, she smilingly said, "I have been lying here all day, and am having a much pleasanter and easier time than I had at the last confinement; so pleasant that I did not think it worth while to send for you till this time; the pains come and go regularly, but they are not so unbearable or so distressing." On examination I found a little hand protruding from the vagina. The head was in the left iliac forsa, and the shoulder had already engaged. I realized at once the eminent danger, and told the husband that I must have counsel and assistance, and requested him to send for Dr. J. H. H. Burge. Dr. Burge came, recognized the situation, and said the responsibility was too great, we must have more assistance, so I sent for Dr. Frank Rockwell and Dr. C. N. D. Jones. As the husband left the room, I said to him, we will try to save the mother. Dr. C. N. D. Jones gave the ether, and with the assistance of Drs. Burge and Rockwell I turned and delivered. Both mother and child were saved. The mother had a pleasant getting up, as in an ordinary confinement. Since, I have attended this woman in four confinements, all normal.

Prolapse of the Funis.—This accident is extremely unfavorable for the child. It occurs one time in two hundred and fifty cases; some calculate that only 45 or 47 per cent. of the children are saved. In most instances it results from an excess of liquor amnii or breach presentations. I have had four cases of prolapse of the cord; in each instance the prolapsed cord was perceived in time to push it up beyond the presenting part, and in each labor the child was saved. If the cord is not pushed up, especially in tedious labor, the child is lost. If the labor is extremely rapid, even with the presenting cord the child's life may be saved.

Placenta Previa.—This is an abnormal position of the placenta, partially or entirely over the internal os uteri. It occurs 813 times in 876,432 births, or not quite one in a thousand. Placenta previa most usually results from endometritis; the ovum, not readily finding attachment, escapes to the lower zone of the uterus, and, if not lost, becomes fixed near the os, and thus, according to location or attachment, may result placenta centralis or lateralis. Muller believes placenta previa due to an early abortion arrested at the lower segment of the uterus.

The prognosis is exceedingly unfavorable, as many as 25 to 33 per cent. of the women perish. Some give the total mortality as 36 to 45 per cent., and Churchill estimates that more than half of the children are lost; others say nearly two out of three of the children are born dead, and more than one-half of those born living die within the first ten days. So only 15 per cent. of all the children are saved. This large mortality of both mother and child are from unexpected hemorrhages, which commonly occur, in the latter months of gestation, from the expansion or dilatation of the cervix. The question

is, What is best to be done? Shall we temporize, give gallic acid, etc., or shall we meet the indications squarely, and make a bold effort to save the mother and child, by inducing premature labor as soon as the child is viable? This is the only safe course. After a hemorrhage from placenta previa has once taken place, a woman is never safe. She is in constant peril. Every hour's delay is an added danger. The next hemorrhage may be sufficient to destroy her life and the life of the child, and this hemorrhage may come at any moment, and without warning. The induction of premature labor is certainly the only hope of the child, as well as the certain protection of the mother, and this procedure is enforced especially by the fact that in placenta previa no labor comes to full maturity.

In 1878 I had a case of placenta previa. It was near the eighth month of pregnancy; there were profuse hemorrhages; the woman's life was in danger; another hemorrhage might be her destruction and the certain loss of the child. I determined to deliver without delay. I did so, and both mother and child were saved.

The next case of placenta previa I had was in 1880. The lady lived in New York City and I in Brooklyn. She had several slight hemorrhages. Sent for me once by telegram, once by message, then sent her carriage; each time I reached the house only after the hemorrhage had ceased. This third time I determined to deliver without delay. I called in counsel. Soon a fearful hemorrhage commenced. Another physician was called in. It was decided to tampon the patient. The tamponing was repeated; all night I was with the patient; she was now of waxy whiteness. I still urged delivery as the only means of saving mother or child. The next morning the tampon was to be repeated. I could not consent; so I insisted upon withdrawing from the case, and advised the husband to call Prof. T. G. Thomas in consultation. He did so. Dr. Thomas delivered at once, and the mother was saved.

The next case of placenta previa I had was in 1890. This patient also was past the seventh month of her pregnancy. She had a severe hemorrhage, and I was sent for. The hemorrhage had ceased; the patient was comfortable, and seemingly all right; still I said to the mother of the patient: "Your daughter is now apparently well, the child is living, and the patient may not have another hemorrhage for three weeks; yet, in less than three hours, she may have one more dangerous than the preceding." I advised immediate delivery as the only safe way; indeed, I absolutely refused any longer to have charge of the case unless something should be done to save the life of the mother and child, and not have the lives of both longer endangered by delay. Prof. Lusk wrote me in regard to this case not to think of the child, but to make every effort tend toward saving the mother.

Drs. J. H. H. Burge and C. N. D. Jones kindly consented to assist. While we were making preparations for delivery, a hemorrhage came on that flooded the bed, the floor, and nearly destroyed the woman. Instantly I put in a Barnes' dilator, and next my arm served as a wedge to stop the hemorrhage while I found the feet and delivered. The patient had an excellent getting up, and a year after was again confined, and had a normal delivery.

In all cases of placenta previa where there is hemorrhage after the seventh month there should be no delay in delivering the woman at once, as the only chance of saving mother and child. With proper aseptic precautions the most serious operations can be done with safety.

How early is a child viable? Usually so considered when past the seventh month; but if a child be expelled from the uterus at a much earlier period, is there no chance of preserving it? May not one born even at the fourth and fifth month be saved? A patient of mine a little past the fifth month was running a sewing machine; it brought on labor or produced miscarriage; before I could arrive the child had passed. It scarcely breathed. I had it wrapped in cotton, bottles of hot water placed around it—almost an artificial incubator. It was fed by injections of milk and water, and a few drops of milk at a time laid upon its tongue. It lived, and this premature child of five months is now a strong and vigorous young man.

Dropsy of the Amniotic Coat.—This was the patient's fifth pregnancy, and she was as large as at the eighth month, but the abdomen was apparently a bag of water. Still I perceived by the enlarged uterus that the patient was unmistakably pregnant and in the fourth month. I so informed

her. She laying over great folds in her abdomen said, "No, she knew better. She had had too many children." Even as she advanced in pregnancy she said she felt no movement. Finally the time came, I attended her, and amid the great rush of waters there was the silken haired little girl. The mother did well, and has subsequently given birth to four children.

Monstrosities.—The cause of monstrosities has been the source of much discussion. It must be the mother's defective nutrition, or abnormal condition of the nervous system, or probably a combination of both. A patient of mine during her pregnancy nursed her husband, who had inflammatory rheumatism and whose limbs were drawn and misshapen. The child came, a most difficult labor, the dystocia evidently due to the peculiar deformities of the fœtus. Instead of the normal lower extremities there was almost a fish like termination. The nurse said, "Do not let it live," said I, "It is not mine to destroy life, I shall do all I can to keep breath in its body." But when there is such extreme malformation of the external form, there is usually some defect in the vital organization. This mass of flesh scarcely drew a natural breath.

The indications are for a mother to keep in as good health as possible during pregnancy, all the vital organs acting up to par, to rest and save her nerve power. If a woman is unduly taxed, and her strength and nerve energy used up in another direction, there is nothing left for the development of the growing child.

Tedious Labor.—In 1864 a woman called to see me who had been eight years married and no children. I replaced the uterus and dilated the antiflexed cervix, and she soon after became pregnant. Knowing there was a lack of development of the genital organs, also recognizing her somewhat contracted pelvis, I turned all my attention during her pregnancy to improving her health and strengthening her general system. One day I found her sitting bent over intently sewing some fine laces for the coming little one. I ordered her to put it down at once, and insisted that she must devote her time between walking around and lying on her back.

The day came for her confinement, a seriously sprained ankle kept me from being with my patient. The third morning her carriage stood at my door, and then with some assistance I went over. The good physicians who had been in attendance and had labored faithfully were now deliberating—"Three days in labor, impossible for the child to be born."

I spoke as a woman, saying: "The child must not be destroyed. All the long eight years this woman has had no baby; this will be her comfort, her happiness; it may be her last; we must save it."

I insisted that it should not be destroyed; I could not see the craniotomy forceps put into the head of this living, moving child. I requested that Dr. Gunning S. Bedford should also be called in consultation. His books had not only been to me a pleasant pastime, but I had studied them as great scientific works.

Dr. Bedford came with his bright cheerfulness. He repeated my words, "that it was only a tedious labor," and with his merry laugh he suggested that we give the patient some ice-cream, and the baby might be tempted to come sooner.

The pains continued; the woman still had more or less mania, but, before the light of another day, all was well. The mother and child were saved. With craniotomy, I believe both would have perished.

My feelings and best judgment are all against craniotomy or any procedure for the destruction of the unborn child. A mother's life is the first consideration, and for her welfare a child may be sacrificed. But may we not save both? A little more patience, a little more care, a little more thought, and a little longer waiting.

A distinguished English author says: "The frequency with which craniotomy has been performed in this country constitutes a great blot on British midwifery. Even in the time of Clarke and Collins, craniotomy has been performed three or four times as often as forceps delivery. This indicates a destruction of fœtal life which we cannot look back to without a shudder."

In Carl Braun's Clinic, 1884 to 1885, craniotomy was done forty-nine times with eight deaths, a mortality of 16.30 per cent. Thorn (Arch. für Gynak., Vol. XXIV., page 437) reports eighty cases from the Halle Clinic, with ten deaths, a mortality of 12.50 per cent., and Merkel (Arch. für Gynak., Vol. XXI., page 461) reports one hundred cases, with eight deaths, a mortality of 8 per cent.

Thus, in these three clinics alone, in the space of two or three years, twenty-six babies were destroyed! How many might have been saved? Must this destruction go on? Dr. Murdoch Cameron says: "I think the time has come when the lives of the mother and child may alike be saved, and prefer to think that an infant come to maturity is destined for something greater than to have its glimmering life extinguished by an accoucher skilled in the use of a dreadful perforator. Let our motto be: 'We live to save, and not to destroy.'"

From the earliest period means have been employed for the mutilation and destruction of the fœtus. It is sad to see the great armamentarium of skilful and deadly instruments that have been arranged for this purpose—forceps for penetrating the skull, the powerful craniotclast for fracturing the bones, and the cephatotribe more surely crushing them within the scalp. Can we look other than with horror upon the little head held in the powerful grasp of this instrument, or see that head severed from the body, or the instrument penetrating the thorax through the diaphram into the abdomen, for the more complete evisceration?

Self-sacrificing and self-forgetful physicians have ever heroically done what they thought best; have undertaken any duty or encountered any danger to save life. Still, in this, should we not weigh and carefully consider? Can we not save both mother and child? We, note that many women, on whom embryotomy has been performed, have previously given birth to living children. This fact speaks volumes. In Thorn's list, fifty-six were multipara, and in Merkel's list, sixty-eight were multipara. So, in these cases, was not a natural birth possible?

When a contracted pelvis renders the delivery of the child *per vias naturalis* impossible, is not the Cæsarian section advisable? Why not at once resort to it? every moments' delay complicates and lessens the chances of mother and child. The operation itself is comparatively easy. The child lies close at hand, just beneath the abdominal wall; we have not to search for it at the bottom of the pelvis, amidst swollen, inflamed and adherent organs, or secure it by the successive rupturing and breaking of strong and well-organized pseudo membranes. A simple cut through the abdominal walls, and then through the thinned walls of the uterus, and it is delivered. The cut grows smaller, and if all is done with simple cleanliness, the womb heals up rapidly and forms no adhesions. Why should there be danger even with the old Cæsarian action? The sad statistics in the past have resulted from the delay, the inaction, or the waiting till the patient was almost moribund. With the beautiful results given us by Dr. Joseph Price in the Porro operation, we see what can be done; there is no longer need for doubt or hesitation.

Another consideration that urges us to this is that embryotomy is as destructive to the life of a mother as the Cæsarian section, probably more so. Laparotomy has been brought to such a great degree of perfection that the most difficult operation can be done with comparative safety.

It was a munificent decree of the Roman Numa, that no pregnant woman should be buried until the fœtus had been removed by abdominal section.

A CASE OF LABOR WITH UNUSUAL MULTIPLE COMPLICATIONS.[1]

By G. W. KEMPER, M.D.,
MUNCIE, IND.

I AM prompted to report the following case of labor because of its many and unique complications—a case occurring in an old primipara, and complicated with eclampsia, vaginal thrombus, adhesion of the placenta, and inversion of the uterus. The labor was expedited with forceps; the mother and child were saved.

Mrs. W., native, aged thirty-six years, primipara. Pains began early in the morning of February 5, 1892, and the waters escaped soon afterward. Pains were trifling during this day, the following night, and forenoon of the next day. During the afternoon of the 6th the pains increased in severity, and Dr. J. V. Baird, of Albany, was called to attend her, arriving about 4 o'clock. On making a vaginal examination at 6 o'clock P. M., he discovered a thrombus of large size on the posterior wall of the vagina. At 10.45 she complained of intense pain in the head, and soon afterward had a severe convulsion, the only one. Dr. Baird requested that I be called to his assistance, and I arrived at 1.30 o'clock on the morning of

[1] Read before the Indiana State Med. Society, May 13, 1892.

the 7th, the patient living seven miles from my residence.

I found the patient having short and ineffective pains. The pulse was weakened. Her mental state was clouded. On examination I found a thrombus, or hæmatoma, the size of a goose's egg on the posterior wall of the vagina. With the patient in the lithotomy position, the tumor slightly separated the labia. Its color was almost black. By the touch I could distinguish a cranial presentation, the head resting in contact with the posterior surface of the thrombus. Chloroform was administered by Dr. Baird. Upon separating more widely the labia, the tumor was quite visible, and I incised it with a bistoury, turning out all blood-clots. I applied forceps and delivered within twenty-five minutes. The child, a male of medium size, was almost asphyxiated, but, after fifteen minutes' efforts at resuscitation, it began to breathe regularly, and the circulation was well established.

While I was attending to the child, Dr. Baird gave his attention to the mother. After the child was cared for, he asked me to notice the condition of the placenta, which I found partially protruding through the vulva, but not loose. I directed him to make compression of the uterus over the hypogastrium, while I would manipulate the placenta. The effort of compression brought on a pain which completely inverted the uterus. The whole mass lay outside the vulva, and the portion of placenta still firmly adherent. This I separated. The uterus was firmly contracted, and but little blood was lost. With the fingers of my right hand placed in a cone-shape, I began pressure upon the fundus of the uterus after I had pushed it into the vagina. Soon I could feel a cup-shaped depression through the abdominal walls, and then the oval-shaped fundus. The restoration was complete. The whole time consumed from the beginning of the use of the forceps until the inverted uterus was restored, was less than one hour.

Two of the complications met with in this labor, namely, eclampsia and adhesion of the placenta, are comparatively common; so much so, that a physician of a few years' practice is likely to encounter a number of cases of one or both of these accidents. In one thousand cases of labor I met with eclampsia nine times and adhesion of the placenta eleven times.[1] Vaginal thrombus and inversion of the uterus, on the contrary, are exceedingly uncommon. A physician might pass a prolonged life-time in an extensive obstetrical practice and not meet with either accident. Still more rarely would he meet with these two unique troubles combined in the same patient. It would be marvelous if such a case should again be duplicated.

In my paper referred to, I recorded the fact that in a practice of twenty-five years I had met with only one case of thrombus, and that a right labial. Charpentier says:[2] "This accident is rare, since Deneux, in a practice of forty years, only observed three cases; Winckel one in 1,600, while in our clinic only one case was noted in 1,800." Spiegelberg says:[3] "The condition, on the whole, is rare. Johnson and Sinclair met with it seven times out of 13,748 cases; Hecker, five times out of 16,435; Dubois, only three times in 14,000; Hugenberger, on the other hand, eleven times out of 14,000 births; Spath, four times out of 6,000." Spiegelberg himself met with five cases in 5,000 labors. A summary of all the statistics mentioned above shows thirty-seven cases of thrombus in 72,583 labors, or one time in 1,961.

The development of a thrombus is generally announced by a severe pain in the affected part. During labor, not only do the vessels become engored through the head being fixed in the pelvis, but the difficulties of delivery may directly cause the injury under discussion. Barnes says,[4] "The head advancing with difficulty carries the mucous membrane, with which it is in contact, down with it, sliding it along on the movable submucous striatum, and even tearing it partly away. In this process numerous blood-vessels are necessarily torn. These pour out blood sometimes quickly, and the thrombus may be fully formed during or immediately after labor." Spiegelberg remarks: "There seems special danger of this injury when the fœtus advances rapidly over the engorged vessels, these probably being lacerated at the moment that the

[1] One Thousand Cases of Labor and their Lessons. *Medical News*, September 12, 1891.

[2] Cyclopedia of Obstetrics and Gynecology, Vol. iii, p. 156.

[3] Text-book of Midwifery. (New Sydenham Society Ed.) Vol. ii, p. 315.

[4] Obstetric Operations, p. 461.

lining mucous membrane and the submucous tissue are pushed over, and detached from them by the fœtus."

It has been shown that women who exhibit varicose veins are not especially disposed to this accident. Primiparæ are more liable to it than multiparæ, owing to the greater firmness of the tissues in the former class.

The prognosis is favorable in small effusions, but is doubtful in large ones. Deneux's statistics gave 22 fatal out of 62 cases, Blot 5 fatal out of 19 cases, and Hugenberger 4 deaths in 11 cases. A summary of these statistics shows a mortality of 31 out of 92 cases, nearly 1 death to every 3 cases. On the contrary, Scanzoni only lost 1 out of 15 cases, she dying from puerperal fever. Fordyce Barker out of 13 hospital patients only lost 2, while his 9 private patients recovered.

Spiegelberg says, concerning the treatment: "As soon as a thrombus is detected the accoucheur should seek to check its further increase by applying cold compresses and by manual compression. The fœtus, if still unborn, must be rapidly extracted. When the hæmatoma prevents this, or is in danger of being bruised during the process, it must first of all be opened with the bistoury. If rupture has already occurred and bleeding is free, there is still more reason for delivering the child rapidly. Indeed, extraction is then our only resource, since the hemorrhage—both the free and the oozing—can only be expected to cease when, by the removal of the fœtus, the pressure which causes the engorgement is got rid of."

I think it may be stated as a rule that when the thrombus is of small size, and does not interfere with the process of labor, it should not be incised; on the contrary, if the size is sufficient to retard labor, it should be incised without delay.

Inversion of the uterus is yet more rare than thrombus. According to Lusk it occurs on an average once in 150,000 labors. In my 1,000 cases of labor already referred to, I met with 1 case of inversion. In the present case the woman exhibited no marked evidence of shock, and the hemorrhage was very slight. The uterus was contracted to the size of an ordinary fist. The accident was readily detected by the mass protruding through the vulva, and the absence of the uterus in the hypogastrium. On inspection its outlines were easily determined and distinguished from the small portion of placenta firmly adherent to the fundus. I decided to remove the placenta before attempting to restore the uterus, the manipulation not requiring more than two or three minutes.

Crede's method was employed, and slight traction was made upon the protruding placenta to aid its expulsion. I think the force we employed was properly applied, and such as any accoucheur is warranted in making. If the force we used was the exciting cause of the inversion, I consider that there was present a predisposing cause that was beyond our knowledge to have foreseen. Inversion is the rare exception, not the rule. When we use proper means for removing the placenta and inversion occurs, we may feel as much disappointed as the surgeon who wounds a large artery that he encounters in a locality where it does not normally belong. If the unexpected occasionally occurs, the fault is not ours if we have followed a correct line of practice.

I shall not attempt at this time to further discuss the responsibility or blame of the physician whose patient suffers an inverted uterus. The subject has received considerable attention during the last few years. Two years ago Dr. Geo. W. McCoy, of Columbus, contributed a valuable paper germane to this subject.[1] Dr. J. C. Reeve, of Dayton, O., has also contributed a paper that tends to clear up some doubtful questions bearing upon the responsibility and cause of inversion of the uterus.[2] Both papers are entitled to the highest praise, and to them I refer the reader.

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[1] Acute Puerperal Inversion of the Uterus. Transactions Indiana State Medical Society, 1890, p. 68.

[2] Moot-points in Regard to Inversion of the Uterus. Gynecological Transactions, 1884, p. 69.

PATIENT—"Doctor, I have trouble about swallowing. Does that amount to anything?"

Doctor (looking down his throat)—"Yes; amounts to five dollars."—*Fliegende Blatter.*

PROSPECTIVE GENEROSITY. — Mamma — "Tommy, why didn't you share your peach with Dolly?"

Tommy—"I gave her the stone; if she plants it she can have a tree."—*Judy.*

THE blazingest spot in this latitude last week is said to have been at Shamokin, where a temperature of 109½ degrees in the shade was reported. That was actually Shamokin hot.

—*Ledger.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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OBSTETRICAL NUMBER.

WE present our readers, this week, by the kindness of Dr. Mary A. Dixon-Jones, of Brooklyn, N. Y., and others, a number devoted to the consideration of subjects connected with the department of obstetrics. We are able to promise another soon devoted to gynecology. As our contributors have done their work so well, there is really nothing further for us to say but to refer the reader to the excellent articles here placed before them.

SINCE our last issue we are please to note that the reports in regard to the spread of cholera are more reassuring. It is pleasing to note the contrast between the intelligent control of epidemics in countries of enlightenment and civilization and the stubborn and bigoted resistance to all reasonable sanitary regulations in countries like Russia, that keep their people in the densest ignorance and superstition.

Letters to the Editor.

RETROVERSION IN PREGNANCY.

RETROVERSION of the uterus is not of unfreqent occurrence, either in the married woman or single girl. It thus becomes an important question to know its cause and how to prevent it. A physician's highest and noblest duty is the prevention of sickness.

A few years ago a young lady in apparently perfect health and vigor called to see me, complaining of almost constant pain in the back, and at the same time informing me she had "some womb trouble." I discouraged this idea, and advised, along with exercise, a due amount of rest, especially at the menstrual period. She came again and again; each time I insisted there was no womb trouble. Finally thinking there might be some flexion or misplacement I concluded to examine the case, but the orifice of the hymen was no larger than a cherry pit, so I declined further investigation.

Two years after, this same young lady came to see me complaining of increasing backache and distress in the pelvis. I still put her off, her appearance being that of perfect health. Six months later she called again, said the pain in the pelvis was so great that she could not be around, and within the last few days she had commenced to have an unhealthy discharge. There was no increase of temperature or pulse, or any indication of inflammatory action. I advised douches, and directed that she should go to bed. Next morning I called; she was complaining of increasing distress and that the discharges were becoming more unpleasant. I decided to stretch the hymen and see what was the matter; found anteflexion of the cervix and extreme retroversion of the uterus. I lifted the organ in position, put in a pessary, and ordered full hot douches twice daily.

Why should there have been this displacement in this apparently young, healthy girl? The offensive discharges were probably in consequence of retained and decomposed secretions.

A word as to the methods of replacement—so many directions are given in the books, lying on the side, etc., that I will remark: I have always found the unin-

pregnated uterus easily replaced by first drawing forward the cervix by means of a tenaculum, and then by the finger, or long forceps, cushioned with cotton, press up the fundus, which can usually be done without difficulty. In this case so small was the passage, after being first assured of the position of the organs, I had only the tenaculum and forceps in the vagina at the same time.

The retroversion of an impregnated or an unimpregnated uterus must result from trauma, or some previous abnormal condition of the organ or of the surrounding structures; and the malposition in any case will produce more or less congestion and increasing sympathetic disturbances. Especially is this so in the impregnated uterus, when the growing size, the new functions, new activities with the malposition, tend more directly to increase the already existing disease, and cause more distress and greater possible dangers.

Retro displacement in pregnancy has, in many instances, been the cause of most untoward results. If the uterus is allowed to remain in this malposition it will, as it increases in size, be more and more impacted in the pelvic cavity, wedged in beneath the sacral promontory, and may become so tightly fixed that its replacement will be impossible. A case is mentioned by Montgomery, when, after death, the bones of the pelvis had to be sawn asunder before the enlarged uterus could be lifted.

In 1876 a young married woman came to me suffering from general congestion and inflammation of all the pelvic organs; she was in the fourth month of pregnancy, and had an extreme retroversion of the uterus; complained of constant and most intense pain in the back, and a most distressing bearing down, not able to be up, yet lying down increased her suffering. The uterus, and all the parts around were found to be extremely sensitive, and the intermitting pains indicated that she was threatened with immediate miscarriage. With these conditions and the possible sepsis there was considerable danger. I first quieted the organs, then lifted gently the enlarged uterus into position, placed a Thomas Cutter pessary, and afterwards treated the congestion and inflammation. The patient began immediately to improve, was comfortable, and went to term. The patient informed me that she had been treated for years before marriage for uterine disease and misplacement, so there was an old pre-existing trouble. She wrote me February 14, 1877: "My little girl was born the 9th day of last December, a protracted labor; I wish I could have been near you. I had a fever after confinement, and I suppose that deprived me of the privilege of nursing my baby. I still suffer with my back. The doctor attempted, but did not quite put the womb in position. I am coming down to see you the middle of next month." She came, I replaced the uterus, and treated it and the surrounding pelvic tissues. The patient improved, and subsequently gave birth to several children.

About the same time I had two other patients with similar conditions, both of whom were in the fourth month of pregnancy, and each had extreme retroversion of the uterus. Fearing that, in replacing the uterus, there might be some untoward accident, I requested Dr. Z. Emercy to be present, and he was in each instance. Both patients did well and went to term.

In 1881, Mrs. M——, then in the fourth month of her ninth pregnancy, consulted me. She had complete retroversion of the uterus, and a deep transverse laceration of the cervix. I replaced the organ, put in a "Thomas Cutter," and five months after delivered her of a healthy male child. Probably the persistent misplacement of the organs resulted from the long-existing laceration, which had prevented involution, and produced hyperplasia and consequent enlargement.

Mrs. C——, came from a neighboring town; said that she supposed herself five months pregnant, but she had not perceived the least change in her size. I found the enlarged uterus retroverted and impacted in the pelvis. I informed the patient that it must be lifted into position, but in doing which the life of the child would necessarily be imperiled; that I would not attempt to replace the organ in my office, but the next day would visit her at her home. This I did. The uterus at first seemed fixed firmly and impacted, but by careful manipulation it was moved and gradually restored to position. The patient had no further trouble, and pregnancy progressed favorably.

A more unusual form of misplacement is extreme anteversion during labor. This patient had been confined nine years previously, at which time she suffered with child bed fever, so that, as she told me,

on the eleventh day, she was not able to turn her head. She first called to see me when in the fourth month of this pregnancy. At the time of labor she did not call me till regular pain had continued for some time, but labor, apparently, had made no progress. I found the enlarged uterus in such extreme anteversion that the os uteri was pressed firmly against the sacrum, so that, for the time being, it was hermetically sealed. By steady pressure, and aftewards bandages suspended from the shoulders, I lifted and sustained the uterus in position, after which labor progressed easily and rapidly.

Many adverse conditions may be connected with pregnancy and labor, which by thought and care may be managed to a favorable issue.

MARY A. DIXON-JONES.

A CASE OF PUERPERAL AMAUROSIS.

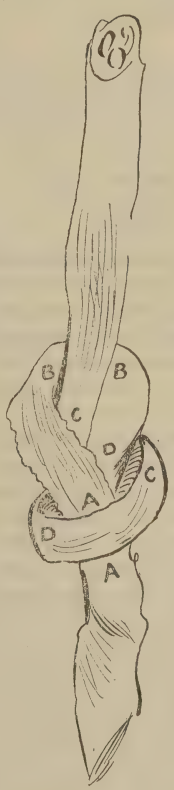
MRS. S., aged twenty-three, when seen before labor was found to have œdematous ankles and albuminous urine. In the morning the patient having had severe labor pains during the night, and the cervix being fairly well dilated, while I was preparing to use the forceps, she suddenly said: "I cannot see; my sight has entirely left me," and almost immediately was taken with a genuine eclamptic seizure. A hypodermic of morphine sulphate was administered, the forceps applied, and a large child delivered readily and safely. She remained temporarily blind for several hours, and was seen by Dr. Chas. H. May, who, in careful examination, found nothing whatever. There were no changes in the fundus except a slight cloudiness of the disk, which meant nothing. It was, I believe, a functional vaso-motor paresis from disturbance of the retinal blood supply. After a few days the patient regained her sight. The albumin persisted in the urine, but under the administration of Highland water as a diuretic, and diluent and a restricted diet, she made an uninterrupted recovery, the albumin completely disappearing.

This condition is an extremely interesting one. In the four cases I have had in my practice fortunately the blindness has been only temporary. It came on at the time of delivery, or was noted soon after, with intense headache and other symptoms of acute puerperal nephritis. In all these cases the urine was highly albuminous. Patients with some degree of blindness are more common, and generally after delivery the recovery is rapid, the sight being completely restored in a few days. Two of my patients were extremely stupid and seemed to be in a partially comatose condition. None of them realized the gravity of their situation.

T. J. MCGILLICUDDY, M.D.

AN OBSTETRIC CURIOSITY.

MARCH 8, 1892, I was called to Mrs. C., thirty-two years old, who was in labor with her eighth child.



Child in L. O. A. Labor normal; loop of cord around the neck, and in the cord a figure of eight-knot about ten inches from placental site.

I preserved a section of the cord, containing the knot, in alcohol, and can say that in all my reading about obstetric cases, this is the first child I ever heard of who carried its number "on a string."

The cord is somewhat shrunken from having been in alcohol.

The letters AA, BB, CC, and DD are to show the places where the cord passes under other loops.

JOHN N. DIMON, M.D.

SHELTER ISLAND, N. Y.

AT a meeting of the Crawford County Medical Society, held July 5, 1892, the following action was taken:

WHEREAS, The practice of criminal abortion is steadily increasing, and, in the numerous cases which prove fatal, it is next to impossible to secure the conviction of the guilty party, because the testimony of the female—who is usually the only available witness in the transaction—is not received by the courts, whereby the

evildoer not only escapes punishment, but is encouraged in his work, therefore be it

Resolved, That we petition the Legislature of this State, at the coming session, to enact a law by which the dying declarations of a person, who may die from the effects of a criminal abortion, shall be received as evidence on the trial of any one indicted for such offense, the same as is now done in cases of homicide.

Resolved, That a copy of this resolution be sent to the various county medical societies of the State for concurrent action, and a copy also to each of the medical journals published within the State.

J. M. COOPER, M.D., Secretary,
Meadville, Pa.

Special Article.

WHY WOMEN DO NOT BECOME MOTHERS, OR CAUSES OF STERILITY IN WOMAN.

BY MARY A. DIXON-JONES, M.D.

ILLUSTRATIVE CASES.

NOTHING is more beautiful than a large family of children. No greater happiness can come to a woman, and that woman is magnificently constituted who can be the mother of such a family and still retain her health and vigor.

Children, if rightly trained, are a never-ending source of joy and comfort. Even the sound of their breathing at night is a solace sweeter than an angel's whisper; their sleeping faces are volumes of loveliness; their exhaustless questions; their thoughts—paraphrases of the mysteries of life; their keen perceptions; their constant playfulness; their never-ceasing activity; their love; their implicit confidences; all make a mother's heart rejoice, and her unspeakable love melt into tenderness. But, oh, the weary, solemn silence of a home without children; the stillness, the dead expression!—nothing is so indescribably sad.

Planted deep in every true woman's heart is this love for children. The sacred penman again and again tells the story: Rebecca was full of sorrow because "she was barren." The beautiful Rachel said: "Give me children, or I die." Sara tells her unutterable sadness in more than human words. Abraham re-echoes her grief, and, in deep woe, says: "I go childless; behold in me thou hast given no seed." Hannah prayed day and night, was in bitterness of soul and wept sore, wept and did not eat, saying: "If thou wilt give unto thine handmaid a male child!" and when a son was given, no poetry can exceed in exquisite beauty her song of thankfulness. Elizabeth was more than rejoiced when the angel said unto Zacharias: "Fear not; thy prayer is heard, thy wife shall have a son." The withering curse pronounced upon the kings Jeroboam and Ahab was, that their households should be childless; but when the prophet wanted to bless "the good woman of Shunem" with the best of all riches, it was promised that she would "embrace a son." "She had no child, and her husband was old."

A poor dispensary patient said: "Life was nothing without children." A lady of wealth, now past sixty years of age, still grieves that she has no child on which to lavish the wealth of her love. Women want these blessings. They long for these sweet, little birds of Paradise, even though they have no nest, no resting place, nor any way to make them comfortable.[1] A woman of countless wealth would exchange all for the sake of one little child of her own. I have heard the moan from the depths of the human heart. Do we wonder? Alas, alas! they lose life's greatest joy.

CAUSES OF STERILITY.

Among the recognized causes of infertility in women are:

1. *Stenosis of the Os Uteri.*—From a very early period stenosis has been recognized as a cause of sterility. More than four thousand years ago the Egyptians studied it, and he who was "learned in all their wisdom" repeatedly speaks of the mouth of the womb being closed; tells how all the wombs of the house of Abimelech were "fast closed." Medical

[1] Who does not recollect the touching story of the little deformed woman, as reported by Dr. I. E. Taylor, at the N. Y. Obstetrical Society? She was four feet four and one-half inches. Five years previously she had been delivered, by craniotomy, of a child that weighed eleven pounds. Again becoming pregnant, she determined to take whatever risks might be necessary for the sake of having a living child, facing the dangers of a Cæsarian section, even when told her chances were only fifty per cent. We equally admire her desire for children, her dauntless courage, and her more than ordinary heroism.

writers of almost every age have referred to it, and eminent surgeons have directed their best efforts to relieve the defect or correct the malformation. Henry von Roonhyse, in his "Medico-Chirurgical Observations," quaintly describes the difficulty, saying: "The neck of the womb is very narrow, hardened, and tapering out, and comes to be shut very close, and even so close that a thin stiletto will not pass into the bottom of the womb; by which infirmity the womb remains shut, the neck comes to be swollen together." The same writer speaks of a cure by the "violence of the knife;" and in 1650, Joannis Schultetus, in his "Instrumentorium Chirurgicorium," pictures a uterotome, copied from some more ancient record, for at a very early period surgery was resorted to for relief. In modern times, probably, the first to popularize surgical procedures for stenosis and flexion was Sir James Y. Simpson, of Edinburgh, and by his bold, bilateral discission of the cervix he made many cures. When stenosis is combined with anteflexion, the operation suggested by the keen intuition of Marion Sims—*viz.*, "posterior section"—will more completely meet all the indications, and is more effectual and safer.

Among the first patients who consulted me in my earliest practice were many who came to know why they did not have children. In some I found stenosis of the os; and when, as far as I could then judge, there were no complications, I used bougies or sponge-tents to dilate, and always done antiseptically, and in no instance did I have a bad result. No doubt success in many instances was insured by reducing the inflammation of the cervical mucous membrane, whose somewhat swollen condition possibly obstructed the os and the already diminished caliber of the cervix. One of the most marked cases was Mrs. C——, who sought, in 1871, medical aid on account of a persistent sterility. I found stenosis of the external and internal os; the cervix was "narrow, hardened, and tapering out," and there was more or less congestion and inflammation of the endometrium. After reducing the inflammation, I used graduated sponge-tents, keeping each one in about twelve hours, and, on removal, swabbed out the whole internal surface of the uterus with a strong carbolic acid solution. The sponge-tents did not cause the least disturbance, and in eleven months thereafter the patient gave birth to a healthy male child.

About the same period I treated another young woman by the sponge-tents; her sterility was cured, and subsequently she gave birth to several children.

In 1876 Mrs. R—— consulted me. For many reasons she wanted to bear children. Local medication, while it improved the patient, did not seem to remove the cause of sterility. I requested Professor T. G. Thomas to see the patient. He considered her condition unpromising, yet advised a continuance of the treatment for the uterine catarrh, which I did, and, at intervals, used three or four sponge-tents. The patient improved and subsequently became a mother.

Thus, in many instances, I have found that sponge-tents have been of valuable service; the temporary pressure has stimulated the endometrium to healthy action, and has had an alterative effect upon the whole uterus; but, without care, sponge-tents may be a source of great danger; the fibers of the relaxing and infectious sponge may so penetrate into the yielding mucosa, so bury themselves into the tissues as to imbed pyogenic germs, and cause serious disturbance, and even dangerous conditions.

Dilatation of the cervix, whether rapid or gradual, is a much cleaner operation, more surgical, more effective, and safer, does especial good in that it more successfully promotes drainage, and thereby has a favorable effect upon the uterus and the uterine adnexa; yet, if this operation, however simple it may seem, is not done aseptically or antiseptically, it may result most disastrously;[1] while, if carefully and properly performed, it does good in many ways and helps to secure favorable results in several other operations, as in curetting, trachelorrhaphy, etc. I have dilated the cervix near three hundred times, and in no instance have I had an untoward result, or even a rise in temperature.

But I have been led to query, if, after all, "stenosis of the os" is in itself a

[1] Dr. T. G. Thomas said in 1886: "Dilatation should be practised with antiseptic precautions, as minute and strict as to details as when used for laparotomy," adding, "I have treated many hundred of cases of anteflexion in this way, and many times have been alarmed by high temperature, making the threat of septicemia, and twice have had pelvic abscesses develop."

cause of sterility. I have seen women with a markedly small os, who have borne children, and, in a few instances, the os has remained small and virgin-like after several parturitions. Yet a contracted os is more easily obstructed; so dilating, or removing any impediments or obstacles, will make conditions more favorable for conception. Even an accidental plug of mucus may block the passage, as we know that simply passing the sound has, in some instances, removed a temporary sterility. In like manner, polypoid growths in the cervix may effectually close the canal and be a cause of infertility. One patient had been married eight years and was sterile. I removed from the cervix two small pedunculated mucoid tumors; in ten months thereafter she gave birth to a child. That stenosis is at least unfavorable for conception, is proved by the fact that many women who have been sterile for years, have, after dilating the cervix, borne several children in quick succession.

II. *Flexions of the Uterus.*—Anteflexion of the body, or of the cervix, is frequently found associated with stenosis and with elongated cervix. For the anteflexion, posterior section with anterior incision has effected most remarkable results. It corrects in a degree the deformity, straightens the curve, renders the canal patulous, and thus in many instances the difficulty has been removed.

One of the first patients for whom I performed this operation, was Mrs. W——, who consulted me in 1876 for sterility. The cervix was acutely anteflexed, and there was stenosis of both the external and internal os. I made posterior section and anterior incision, under full aseptic precautions, put in the intra-uterine glass stem, tamponed for three days, then introduced the cup-shaped pessary. The patient recovered without a bad symptom, became pregnant a short while after, and in due time I delivered her of a well-formed, vigorous child, and there was no laceration of the cervix.

Some have thought that patients who have had stenosis were more liable to cervix lacerations. But stenosis of the os, when not the outcome of disease, or caustic treatment, is not a cause of, nor does it predispose to lacerations of the cervix. I have demonstrated by microscopical examination that lacerations occur in those cases where a previous inflammation has transformed portions of smooth muscle-fiber into fibrous connective tissue, which cannot expand, and, consequently, during a strong uterine contraction, breaks or tears; hence, the laceration.[1]

It has also been said that a person who has had the operation of cervix incision is liable to abort. This is equally incorrect. The circumstances do not justify the conclusion. I have never known or heard of an instance.

The next patient for whom I operated by posterior section for anteflexion was Miss R——, in 1878. Her dysmenorrhœa was so severe, and the reflex irritation to the nervous system so great, that her friends and many of her schoolmates thought that her mind was becoming affected. In the treatment of this case I had tried sponge-tents without good results, so decided to make posterior section of the cervix. This was done under full antiseptic precautions. The patient did well; there was no hemorrhage nor rise of temperature. The dysmenorrhœa was relieved; she was less nervous, and there was a great improvement in her mental condition, so much so, that her father said "she was another girl." Not a great while after, her father said, she married, and within a year she gave birth to a child, and since has had three children.

Miss S—— had an undeveloped, retroverted uterus; the cervix was acutely anteflexed at the internal os, dysmenorrhœa was very severe, and her nervous system and mental condition were morbid. I lifted the uterus in position, and so extreme was the flexion that to straighten the canal it seemed necessary to make posterior section; after which I introduced the intra-uterine glass stem, and subsequently a pessary to hold the organ in position. The patient's sufferings were in a measure relieved and her general health, nervous, and mental conditions were greatly improved. The operation corrected not only the deformity, but stimulated the infantile uterus to healthy action. This young lady married and subsequently had a family.

In 1876, Mrs. W—— consulted me in regard to her sterility. She had stenosis of the os, anteflexion of the cervix and suffered with dysmenorrhœa. Posterior incision was made; the second day after, Professor T. G. Thomas saw the patient;

[1] Proceedings of the New York Pathological Society, Nov. 9, 1887.

he thought the operation very satisfactory, and that it would be followed by the best result. The patient made an excellent recovery without a bad symptom; yet in all the years since, even with the cumulative treatment of other physicians, she has had no children. I am now convinced that her case was complicated with salpingitis, and it was the ulterior cause of her sterility.

On one occasion I was to perform this operation when I accidently mentioned it to Professor B. F. Dawson, of New York; he said he considered the operation exceedingly dangerous; that he knew a woman who was then dying in consequence of it, and had known of several deaths from the same cause. I could not see at the time, nor do I yet, any danger in the operation if it is done aseptically, and if there are no complications, as pyosalpinx, or pelvix abscess. The deaths that have occurred, I believe, have resulted from sepsis, hemorrhage, or co-existing disease of the uterine adnexea. The operation was performed for this patient, she had no untoward symptoms, her general health was very much improved, but she remained sterile.

Why in these two cases was the sterility not removed? Each operation was carefully performed, attention given to every detail, and we had reason to expect the best results. If the flexion and the stenosis were the cause of the sterility, after these were corrected why should the sterility have continued? No doubt in each case there were other and co-existing causes.

Early in 1886 I was consulted by a young woman, Miss T——, who had stenosis and anteflexion, with dysmenorrhœa, so that her general health and nervous system were greatly affected. The uterus, thus doubled upon itself, was retroverted. I performed posterior section for correcting the deformity and straightening the canal, and then restored the uterus to position. After the operation Professor Gill Wylie saw the patient, and he thought the best results would be secured; and so it proved, not only by improving the position and condition of the uterus, but principally by favoring the health of uterine appendages; for, as I have elsewhere stated, anteflexion of the uterus tends to develop disease of the uterine adnexa.

The last time I performed posterior section of the cervix was in 1887. This patient had a similar deformity; and the anteflexion had probably caused the oöphoritis, from which followed the enlargement of the ovaries and their consequent dislocation. Posterior section gave free drainage, and thus prevented the already diseased and dislocated ovaries from becoming more and more affected, and gave them a chance to regain a degree of health.

In every instance that I have performed posterior section of the cervix, the patient has been benefited.[1] Still I believe, in most cases, dilatation of the cervix will answer the purpose and meet the indications more fully. The drainage promotes the health of the uterus, the adnexa, and indirectly of the whole system, and at the same time tends to relieve an existing sterility.

However, I began now to doubt whether anteflexion of the cervix should be classed among the causes of sterility, especially as I have observed patients who had anteflexions of the cervix, in some instances very acute, together with stenosis of the os, and yet these patients became pregnant without delay or apparent difficulty. A young married woman, who, on account of an exaggeration of both of these conditions, I thought doomed to sterility, in ten months after marriage gave birth to a child, and has had one every eighteen months since, and even now, after five parturitions, there is still an anteflexion of the uterus.

Four summers ago an unmarried girl, scarce eighteen years of age, called at the office to know her condition. She had extreme stenosis and acute anteflection of the cervix, and was two months pregnant. The scientifically branded uterus had promptly and successfully done its full duty, even against the owner's wishes, and to her great dismay. The spermatozoids can climb through devious crevices, successfully make their way, and do their work under most unpropitious circumstances.

A short time after seeing the above patient, a young married woman, Mrs.

[1] Dr. H. P. C. Wilson said before the American Gynecological Society: "I am convinced after an experience in four hundred cases of posterior section, that nothing which I can do can bring so much relief to the patient as this operation. (*Gynœcological Transactions, 1885.*)

B——, consulted me for sterility. I found flexion of the uterus, stenosis of the os, and there also existed some oöphoritis, catarrhal salpingitis, and a slight displacement of the uterus and of the uterine appendages. I made no section of the cervix, used no sponge-tents, no dilatation, nor divulsion; but, in addition to constitutional treatment, I applied tampons of boro-glyceride and alum. There was great improvement in her general health, and anteflexion was corrected, the congestion and inflammation of the uterus were relieved, and the neighboring engorged blood-vessels were depleted and stimulated to renewed vigor, and the patient's general health was improved. Soon after she became pregnant, and she has since had three children.

Recently a patient came to me from the north of the State. She had been married some years and had no children. The pain at menstrual and intermenstrual periods was so great that she said she often wished herself dead, and considered how she might destroy herself. I gave constitutional and local treatment, dilated the cervix, used tampons, etc. She was very much improved, and a few days before her visit home, I dilated the cervix a second time, swabbed the whole internal surface of the uterus with carbolic acid, remarking to the patient that there might be a possibility of conception. During her stay at home she said that she had not felt so well for years, nor had she had so good an appetite. Some time after she returned for a continuation of treatment, and was found to be pregnant. In this case dilatation was as effective as either sponge-tents or posterior section would have been.

Dr. T. G. Thomas says: "An anteflexion is always a matter of grave significance," and in his interesting paper before the American Gynecological Society he further stated: "The wearing of heavy skirts forces the abdominal viscera down upon the growing uterus, and corporal flexion results. If the rectum is constantly distended by masses of fecal matter, the neck is sharply pushed forward, and cervical flexion results."

These are golden words. No organ will act as well when laced and misplaced by corsets. We cannot begin to realize the vast injury which corsets do women. As I said in an article published in *Health and Home*, April, 1871, "Tight lacing is doing more to undermine the health of American women than any other one thing." The only wonder is that it does not more seriously interfere with the functions of the genital organs and put them more out of position. We marvel that women can stand it so well. During the late war many of the Zouaves had hernia, simply from wearing tight belts around their waists.

Anteflexion of the cervix, however, in most instances, dates from the beginning of existence, or commences in feebleness of early life.

Lateral flexion has by many been considered a cause of sterility. This form of flexion is undoubtedly produced by some pelvic inflammation, and the indications are to treat the pelvic trouble. If there is no peritoneal inflammation, then probably dilatation may be of some service.

Retroflexion is a more serious cause of sterility; yet even with retroflexion conception is not impossible, especially in uncomplicated cases. The uterus may be lifted and held in position by a pessary; or, more completely to overcome the difficulty, the round ligament can be shortened, or ventral fixation performed.

But when there are adhesions, and the retroflexed uterus is bound together, and bound to the floor of the pelvis by these adhesions, retroflexion becomes one of the most formidable and incurable causes of infertility; for the adhesions, or pseudo-membranes, are produced by repeated attacks of peritoneal inflammation, which inflammation has doubtless originated from purulent salpingitis of the tubes, a disease which, probably in every case, has destroyed their physiological functions, and thereby render conception impossible.

Some recommend massage for stretching the adhesions and replacing the uterus, but if the adhesions are entirely removed, and the uterus in normal position, the salpingitis will of itself be a cause of sterility, and will continue to produce repeated attacks of peritonitis, and there will consequently be a reproduction of the adhesions and pseudo-membranes. Massage can not remedy the evil, and might under some circumstances be attended with grave danger, or possibly with fatal results.

In 1888 Mrs. O—— called to consult me. She had acute retroflexion of the uterus, and the uterus thus flexed was bound to-

gether by adhesions, retroverted and by similar adhesions, or strong pseudo-membranes, was adherent to the floor of the pelvis, while on the right was a fluctuating mass extremely sore and sensitive. I considered her condition dangerous, and advised laparotomy without delay. It was performed soon after. As previously diagnosed, there was an abscess on the right. This extended into the adjoining aponeurosis, and was closely connected with the psoas and iliac muscles, many fibers of which were found in the specimen removed. The anterior wall of the abscess was formed partly by the remains of the tube and the ovary. So great was the destruction from the abscess that the right Fallopian tube was almost gone, only a trace of the caliber could be seen, lined by shallow folds of mucosa, on the surface of which were a few vestiges of columnar ciliated epithelia; the flexed uterus and uterine appendages were found in a mass of dense, well organized psuedo-membranes. These were separated or broken, the diseased mass from each side was removed, and the uterus was lifted and stitched to the abdominal wall. The patient made an excellent recovery, and is now in good health.

This case well illustrates the complications which may accompany a retroflexed uterus, bound with pseudo membranes, and how the anatomical structure and the physiological functions of the uterine adnexea are in such conditions more or less destroyed.

III. *Undeveloped Uteri.*—This is frequently found associated with anteflexion. Either the flexion or the lack of development may interfere with the normal functions of the uterus, and both conditions may exist in women of an otherwise splendid physical organization.

As some women do not mature until they are eighteen, instead of twelve or thirteen years of age, naturally the same difference may be observed in the development of the genital organs; and for the time being, thus undevelopment or inactive condition may be a cause of sterility. In most instances, it is only necessary for these organs to be invigorated, the complicating disease removed, and the general system strengthened. Treated in this way, I have seen women with undeveloped uteri in time become mothers of large families of children.

In 1865, a young married woman consulted me for sterility; the uterus was much below the normal size, anteflexed and accompanied by scant menstruation. I treated her locally and constitutionally; subsequently she became the mother of a number of children.

Along with an undeveloped uterus there may be a lack of development of the ovaries or tubes, such as would be a malformation, yet these organs, even with this disadvantage, may, if healthy, perform their functions.

Mrs. S—— had given birth to several children; subsequently, on account of disease, the uterine appendages had to be removed, and there was discovered a very anomalous condition of the Fallopian tubes; both were undeveloped and bifurcated up to their union with the uterus.

IV. *Physical Overwork.*—Exhausting labor in men or women may interfere with the efficient action of any organ, as the stomach, lungs, brain, etc., so when the system of a woman is exhausted by undue manual labor, the nervous power and vital resources used up, there may not be sufficient strength for perfecting the genital organization or for the performance of its functions. Our bodies may be made such machines of toil that not only the higher, but the procreative, powers may show a lack of activity and vigor. I have known strong, sturdy women to go through such prolonged labors, such continued herculean tasks, that they had not the capability, or delicacy, or firmness to perform the function of maternity, or sufficient humanity in them to want children. Such women are "martyrs to labor."

A German woman, who visited the dispensary, said: "That from her sixth year she plowed, hoed, cut hay, gathered into barns," etc. In moderation, these labors might have made her strong and vigorous; they were no more severe or exhausting than much of her household work, but continued eighteen hours each day, without sufficient rest or sleep, the life was taken out of the woman, and after a marriage of over twenty-five years, she had no children, and, at the age of forty-five, had still an undeveloped uterus, which was already in a state of cancerous degeneration.

Another dispensary patient, a strong, Irish woman, with a powerful physique, almost a giant body, yet she had been such a machine of toil that she had almost

lost the fineness of womanly nature, had never been able to bear children, and her insignificant uterus was still small and infantile.

If persons who are extremely overworked and exhausted do have children, the latter frequently show a lack of power, mental and physical. Farmers, both husband and wife, naturally vigorous and strong, have been so taxed, their vital resources so drained, that there was no vitality left to give vigor to their pregnancy; and, in more than one instance, I have seen whole families of such children die off before their parents. Also, during pregnancy, the vitality and nerve powers may be so exhausted that there is not sufficient left for the development of the child; on the contrary, feeble women, if there is no constitutional taint, may, while pregnant, so rest and conserve their life forces and strength, that they give birth to comparatively healthy and vigorous children.

V. *Mental Exertion.*—This is given by some as a cause for sterility. How can the evil be remedied?

Dr. H. F. Campbell, in his paper before the American Gynecological Society, 1888, said: "Our female colleges and seminaries are undoubtedly successful in producing women of the highest intellectual type, but may not this modern system of education have perverted their destiny and lessened their chances of maternity?"

Are we then to conclude that developing and improving one part of the body necessarily dwarfs another, or weakens its power and functions? Does the welfare of one organ detract from the capability of another? Does vigorous exercise, to expand the lungs, weaken and injure other portions of the body? On the contrary, does not making any one part stronger, healthier and better, improve the rest and add to the efficiency of the whole? If the roots of a tree are vigorous, will not the branches spread and the leaves bloom more beautifully? In like manner, does not making the lungs stronger, the stomach healthier, or the liver better, improve the whole human body? And will not developing the brain and nervous system give a healthier stimulus, and a better nerve supply to all other parts and organs?

Dr. Campbell continues: "The most unfortunate requirement of female education is the time at which it is most actively conducted, namely, from eleven to sixteen years of age, which is the period of sexual development and of perfecting the organs of reproduction. When the years of sexual development are passed in bodily activity and without mental strain, the reproductive organs are naturally and promptly developed, their functions normally performed, gestation prosperous, parturition easy, and offspring numerous. May we not legitimately conclude that conditions so entirely opposite and adverse as these, in which the adolescent female of the better class must pass the period naturally allotted to sexual development, may be considered a potent factor in the arrest of ovarian and uterine development by diverting the vital forces from the sexual organs at the very time their exercise is most needed. The infantile uterus and atrophic sterility will be found, I think, more frequently among women who have been subjected to severe laborious intellectual labor during the period of pubesance, than in those of any other class. The prize girl will often fulfill the destiny of a childless woman."[1]

If it can be shown that sterility and undeveloped uteri are found proportionately more frequent among educated women, among those who have gone through a collegiate course of study, "those who have been subjected to severe intellectual labor during the period of pubescence," than among women who have had no intellectual training, who have passed the period of the development of the sexual organs in bodily activity and without mental strain; then with some show of reason we might seriously inquire, if "severe and laborious intellectual labor" during the early periods of life, was a "potent factor in the arrest of ovarian and uterine development;" whether it did cause "undeveloped uteri" and "atrophic sterility," and if such intellectual labor did lessen "the chances of maternity," and to that extent pervert the destinies of women.

But is this the case? Are "undeveloped uteri" and "atrophic sterility" more frequently found among educated women than among those who have had no mental training, and does mental training in girls between the ages of eleven and sixteen tend to prevent the develop-

[1] Gynecological Transactions, 1888, pages 442–444.

ment of the genital organs and interfere with their functional activity?

In answer to a portion of the question, shall we refer a moment to the long array of names of brilliantly educated women who have had large families of children?

I was for years a student in one of the largest and most advanced colleges for women then in this country. The students pursued a collegiate course of study, embracing the higher branches of mathematics, the natural sciences, intellectual and moral philosophy, English literature, belles lettres, etc. Many of the young ladies, besides, had heavy tasks daily in the classical and modern languages. Afterwards as a teacher I was in the college four years, and later, two years in another college, equally distinguished and equally advanced, and for a number of years I was principal of a young ladies' seminary of a high grade, which demanded about the same course of study. During this period of thirteen or fourteen years, over three thousand young ladies came under my observation, who during the period allotted to sexual development were subjected to continuous "severe and laborious intellectual labor;" yet in all this number and in all these years, I do not recollect a single one giving any indication that "the reproductive organs were not naturally and promptly developed," and that "their functions were not normally performed." The young ladies were under my observation at all hours of the day, yet in all these years, among so many young women, I do not remember one who apparently had any difficulty with the function of menstruation, or suffered so that her studies were in the least interrupted, or that it was necessary to lie in bed; except, perhaps, in one instance, and this young lady did so at the periods on a few occasions, because she wanted, as I imagined, a chance to read Browning's poems, or write imitations of the same.[1] I would have been apt to have noted any sickness, as I was then reading medicine; and, besides, during all these years physiology was one of the branches I was studying or teaching.

The young ladies who were subjected to these severe intellectual tasks grew healthier and stronger. They had their regular hours for recreation and sleep; still severe intellectual labor was demanded, equally heavy as long continued, and for as many years as young gentlemen have at college; yet the young women were not made sterile thereby, or invalids, nor did they lack in any way perfect development. Most of them afterwards married and had large families of children.

I have known "the first honor girls" for many successive years; girls who gave themselves up to the closest and most "laborious intellectual labor," and who, for their greater mental discipline and profounder intellectual attainments, stood first. They were emphatically "women of the highest intellectual type;" yet I did not know one who "fulfilled the destiny of a childless woman." I recollect one with her pretty blushing face; she married; children came in quick succession till her table was surrounded by young and happy faces. Another "first honor girl" accustomed always to outstripping the members of her class, when married and settled in a large city, was equally successful in outstripping her neighbors in the number of her children.

A "first honor girl" of another school, a student, a writer and a public speaker, yet is blessed with more than the usual number of children, and has strength to look after these children and after her household affairs, besides doing much outside work in blessing humanity. "She girdeth her loins with strength and openeth her mouth in wisdom."

A "fourth first honor girl" who pursued an extensive course of study, especially severe intellectual labors, was a superior mathematician, a student of five languages; this woman, at the birth of her third child, had been all day actively engaged in some intellectual pursuit, returned at 9 in the evening from a walk, and before 11 o'clock all was over. She had no trouble then, before, or after. "Gestation was prosperous and parturition easy." So of many of these three thousand and more women who were subjected to the modern system of female education. They suffered in no way from lack of development, and their functions were normally performed.

In the twenty-five years I have practised medicine, I have not seen a case of undeveloped or infantile uterus in a woman with a college training, or who had passed through a regular course of study,

[1] This young lady graduated at the college, afterwards married and had a number of children.

except in one instance, and this young woman had, before she commenced her college course, an anteflexed, undeveloped uterus. It was stamped from her birth, and by no means a consequence of much study, or the result of intellectual labor.

On the contrary, I have seen women who have passed their younger years in bodily activity, with no college education, and a plentiful lack of mental culture, "whose reproductive organs were not naturally developed nor functions normally performed," and who had "undeveloped, anteflexed uteri" and "atrophic sterility." I have seen proportionately more cases of sterility and imperfect development in my dispensary clinics than I have found in my private practice. Many women who come to the clinics are without education, not able even to write their names, yet have little, undeveloped, anteflexed uteri, which are incapable of performing their normal functions.[1]

Recently, an apparently healthy, vigorous woman came to the clinic, inquiring the cause of her infertility—married nine years and no children. Her mind had never been disciplined by intellectual labor, yet she had an infantile uterus lying useless on the floor of the pelvis, and toppled by its side were the tubes and ovaries, equally incapable of performing their functions. Many uneducated girls call at the dispensary suffering from amenorrhœa; thus, in early womanhood, menstruation is almost nil; as one said: "It lasts scarce a day, and one napkin is sufficient for the period." Others come complaining of the most distressing pain in the performance of the function. Some give evidence of arrested ovarian and uterine development, and a large number complaining of sterility, a sterility produced by almost as many causes. Others again tell of suffering during gestation, and show most serious injuries as a result of "parturitions" that were not "easy."

Thus, in many of these women who have not been to female seminaries and colleges, or injured by the modern system of education, we "find the reproductive organs not naturally developed, the functions not normally performed, gestation not prosperous, parturition not easy, and the offspring not numerous."

One young woman who had not been afflicted with any kind of mental training, yet she did not have as much as an undeveloped uterus. There was no uterus, there were no ovaries, no Fallopian tubes, no vagina, and no menstruation.[1]

I maintain, therefore, that lack of mental discipline or training does not insure or favor more perfect development of the genital apparatus, or more capability in performing its functions, nor does collegiate training or systematic intellectual labor during the period of pubescence, or at any other period, if pursued under proper hygienic conditions, interfere with the development of the genital organs, their powers or functions, or lessen the chances of maternity. On the contrary, mental culture and scholastic training tend to a fuller and more perfect development of the whole body, tend to make grander women, mentally and physically, women who are more capable of bearing healthy, vigorous children, and certainly more capable of training them properly.

Mothers who have large families of children, have them not because of lack of culture and scholastic training during the period of pubescence, but because they have good and well constituted bodies. It is a glorious thing to be well born. Besides, such women generally have full use of all the powers of the body; the organs are not cramped or bound in, nor their normal action prevented by the cruel trammeling of corsets.

Of course, we admit that excessive brain work, over-study, and unhealthy habits are harmful to every vital function, and will make either boys or girls, men or women sick.[2]

Another fact which is well to consider. Children without mental cultivation, with minds barren of thought, are sometimes

[1] I have been especially interested in glancing over the books of my dispensary clinics in 1883, 1884, 1885, how many cases of an anteflexion are noted and pictured as found in those poor uneducated women who "had bodily activity and no mental strain."

[1] Prof. B. F. Dawson saw this case with me, and had we not been convinced of the absence of all these organs, we would have considered the question of making an artificial vagina.

[2] In the past I have written and lectured on health subjects and one of the most urgent demands I have made to mothers was against school taxation in early childhood. The brain at this tender age cannot stand the high pressure and stimulation. Children who have no special tasks till they are seven, eight, or nine years of age, very soon surpass the early prodigies.

apt to have a premature sexual excitement, and perverted development of the sexual organs, oftimes resulting in complete exhaustion of the sexual organs, as well as of the body and mind.

Again, every gynecologist will bear witness that diseased uterine appendages are found less frequently among educated women in the higher walks of life. To find a large practice in this department, one must get their patients from the dispensaries and from among the poor and the uneducated.

Diseases, such as endothelioma and gyroma, in which the normal structure of the ovaries is more or less destroyed, would seem more likely to occur when the vital forces were used up in other directions. Yet, out of twenty or thirty cases of these diseases, I have not found a single instance in one who, in younger years, had severe intellectual labor or scholastic training.

If study prevents development, by diverting the vital forces from the sexual organs at the very time when their exercise is most needed, will not the same principle apply to boys pursuing a college course? What is the difference? "Male and female created He them." Woman is subject to the same laws of growth and health as is man, and like him she is capable of high mental cultivation, and, at the same time of retaining the full power of her procreative functions.

Dr. H. F. Campbell instances the savage, half-civilized Indians and Negro women of Southern plantations. There are many Indian women who are sterile, who have anteflexion, and who suffer from these infirmities, and who die young on account of complications. Women's physical paradise is not among the savage or the semi-civilized Indians.

As to the Negro women on Southern plantations, I was born south of Mason and Dixon's line, and I know that many of the colored women are sterile; many do not have prosperous gestation, or easy parturition, nor numerous offspring. It was among these women that Marion Sims was led to study the remedy for vesico-vaginal fistula, showing that the parturitions were not always easy.

Properly educating and training the mind does not render any organ less capable of performing its normal functions. To insure the highest degree of development, both bodily activity and mental culture are essential.

VI. *Misplacement of the Uterus.*—This has, in many instances, been a cause of sterility. In some I have placed a Hodge pessary to correct retroversion, and women who had previously been sterile for years, conceived.

More than a dozen years ago, a young women consulted me suffering locally and in general health, but most grieved that she could not bear children. Her only child, born nine years previously, had died in infancy. I found a deep, transverse laceration of the cervix, retroversion of the uterus and a torn perineum. I replaced the uterus preparatory to repairing the injuries, but before I had the opportunity for so doing the woman became pregnant. Another woman who had extreme prolapsus of the uterus, and for years an acquired sterility, likewise upon replacing the uterus preparatory to certain plastic operations, pregnancy supervened.

VII. *Lacerated Cervix.*—This may be a cause of sterility—

1. From the resulting inflammation and change of the cervical and uterine mucous membrane;

2. From a weakened, relaxed and hypertrophied state of the whole organ;

3. By exciting an inflammation that may involve the uterine adnexa. By repairing the laceration these difficulties may be relieved and possibly the sterility be cured.[1]

Mrs. A—— consulted me in 1885, being a sufferer locally and in general health,

[1] Dr. Joseph Price, in his timely and able article published in the *Buffalo Medical and Surgical Journal*, of November, 1890, shows how major pelvic troubles are traceable to minor gynecological operations. Any minor operation of the cervix, if not done aseptically, may result in serious pelvic trouble. When the operation of restoring lacerated cervix is performed, a patient should recover in eight or ten days; and she will if there is no sepsis. If she does not, and if, as in some instances, she is sick for weeks in consequence of the operation, mischief is done, or, in the emphatic words of Dr. Price, "The person is made distinctly worse by operative interference." I have, in delicate women, cut from the cervix large portions of diseased tissue, brought together the great flaps, and in a week the wound was entirely healed and the patient comfortable. Dr. Price wisely reminds us "That when there is pre-existing disease of the pelvis, no cervical operation should be attempted."

and had an acquired sterility of ten years' duration. There was an extreme bilateral laceration of the cervix, lips everted and the mucous membrane covered with small erosions, some portions of which were in a state of deep ulceration, bleeding at the slightest touch. I repaired the laceration. The patient made an excellent recovery, and after the operation the uterus presented an entirely normal appearance. Her general health was very greatly improved, and soon after, in quick succession, she gave birth to three children. Thus, repairing the injury improves the general health, prevents untoward after results, and, in many instances has removed an acquired sterility. When it is properly performed, the uterus becomes more healthy, and consequently more capable of performing its functions.

In 1883, I restored for a patient, Mrs. G——, in the Woman's Hospital and Dispensary, a deep transverse laceration of the cervix; subsequently, she had a number of children. Mrs. R—— was a patient in the same hospital, had a similar laceration, and was sick and suffering in her general condition. If the injury had not been repaired she would have continued to be sick, having constantly more or less distress, and would have remained sterile. The operation was advised, not, however, on account of sterility, but because of her local suffering and enfeebled health. She made an excellent recovery, and afterwards had five children. Mrs. G——, in the same hospital, had also a deep, transverse laceration of the cervix, which was restored with equally good results.

A few weeks after, when I repaired the perineum of this same patient, Drs. J. H. H. Burge, F. W. Rockwell and Colton were present; they had an opportunity of seeing the already restored lacerated cervix; as one of them remarked, the result was perfect. After the operation, the patient's health was greatly improved, and subsequently she had several children.

In 1884, Mrs. D——, from a neighboring city, consulted me for sterility and pain. Thirteen years previously she had had a child, at which time occurred the deep transverse laceration of the cervix, in consequence of which there was a very aggravated and diseased condition of the cervix. The injury was repaired, the patient's health restored, and soon after she conceived, and subsequently she gave birth to five children.

Many instances I could narrate. One of the most interesting of the kind was a friend of the last-named patient. Her only child, born five years previously, had died in infancy. I found an extreme laceration of the cervix on one side, extending past the vaginal junction. The operation of trachelorrhaphy was performed, and in less than a year the patient gave birth to a child, and has had five children since. In 1885, Mrs. C—— was a patient in my private hospital; she was in a very depressed state of health, and had a deep transverse laceration of the cervix. I restored this laceration in the presence of several physicians, who were at that time attending the New York Polyclinic. The operation was successful in every respect.

Mrs. Y——, suffering from a similar condition, was, in 1888, operated on in the Woman's Hospital, of Brooklyn, and the only reason why she wanted the operation was to remove an acquired sterility of nine years' duration. So, many instances could be given where the operation has resulted satisfactorily in this respect, and probably it would in every one if there were not other and pre-existing causes of sterility. Consequently, there will sometimes be a disappointing result.

In 1876, I performed this operation for Mrs. L——, on account of acquired sterility of some nine years' duration. Dr. C. N. D. Jones assisted; Dr. Z. Emery administered the ether. The patient was young, and in some respects seemed to be a favorable case; but the sterility was not removed, because, as I now know, there was tubal disease. So another patient, Mrs. Y——, had an acquired sterility of nine years. The lacerated cervix was repaired, but the sterility continued.

Thus, while a lacerated cervix is often a cause of sterility, still we know it is a fact that some women are exceedingly fruitful who have laceration of the cervix to such a degree that it is a question whether there is sufficient vantage-ground to hold the fœtus. One patient of mine who had such a laceration had nineteen children; another had fourteen, another sixteen, and one twelve—the last one again pregnant. While in these cases the laceration did not cause the sterility, yet the women were all suffering locally and constitutionally in consequence of the

injury, and in such depressed states of the system a lacerated cervix may become the seat of a malignant growth. Attention was drawn to this fact more than twenty years ago by Dr. T. A. Emmet.

VIII. *Lacerated Perineum.*—This, in many cases, has been a cause of sterility, by producing necessarily more or less misplacement of the uterus and the uterine appendages, and consequent disease and functional disturbance. So, repairing the injuries has, in many instances, resulted in restoring the organs to health and enabling them to perform their normal functions.

IX. *Fungoid Growths.*—These, in their different stages, are more often the cause of sterility than many suppose. When they exist, the mucous membrane is thickened, the utricular glands diseased, and the uterus itself incapable of performing its normal functions; besides which, the repeated hemorrhages may be a cause of sterility, by preventing the fixation of the ovum.

Mrs. H—— after the birth of two children had become sterile. The frequency and duration of menstruation continued to increase until she had well pronounced menorrhagia, and finally it became a dangerous hemorrhage. I curetted the uterus, removed a large amount of fungoid tissue, the hyperplastic mucosa, after which the menstrual flow was normal, and in two months the patient conceived.

In September, 1887, Mrs. H—— was brought to the Woman's Hospital, of Brooklyn, in a feeble and almost dying condition, perfectly exsanguinated, lips blanched and pulse rapid. She was forty years of age, and had been sterile for a number of years. That evening, after attending to a number of patients, I was about to leave the hospital, then past 10 o'clock, when seeing the woman in apparently so dangerous a condition, I did not consider it safe to leave her even until next morning, so had her placed upon the table, curetted fully the whole internal surface of the uterus, and swabbed it out with pure carbolic acid. The patient had no more hemorrhage, gained strength rapidly, and a month or so after leaving the hospital conceived.

In 1875 I had a similar case of long existing sterility, with fungoid growths; finally the patient was taken with profuse and apparently dangerous hemorrhage. I requested Dr. Louis Pilcher, of Brooklyn, to see the patient with me; said to him that I thought it was fungoid growths, and that they should be removed. But so aggravated was the patient's condition that Dr. Pilcher judged it was cancer, and that the history of the case would be repeated hemorrhages until she died. The hemorrhage becoming more dangerous, I called in Dr. T. G. Thomas, of New York, he diagnosed fungoid growths, and at my request removed them. The patient recovered, and is still in good health.

X. *Diseased Ova.*—I have not yet seen the condition of the ova mentioned as a cause of sterility, yet it is a serious and frequent cause, and no doubt is the secret why, in many instances, well-directed efforts to cure sterility have been unavailing.

I have been surprised in studying the morbid anatomy of the ovaries to find how frequently the ova are diseased and abnormally changed. In 1887 a woman came to me; she was twenty-seven years of age; married six years and no children. The patient was sad and broken hearted, not so much because her health was wretched; that she was emaciated pale and cadaverous, suffering much pain, and not able to work, or attend to her household duties, but because she could not have children. She had had much medical treatment, but no good results. The ovaries were so seriously diseased that to me it was a question of saving the woman's life, and try to give her some degree of health, rather than considering whether she could have children or not. There was evidently some serious and unusual form of derangement of the ovaries. I informed the mother and the husband that I did not believe that anything would restore the patient to health or prolong her life but the removal of the diseased structures, which I was sure were becoming more and more profoundly affected. They were removed; the patient made a good recovery. Afterwards, by microscopical examination, it was found that almost the entire structure of the ovaries was destroyed by an endotheliomatous formation. The ova also were found profoundly diseased, some were filled with medulary corpuscles, without a trace of the yolk, or of the macula germanitiva. In others the yolk was reduced to protoplasm, and the few epithelia that remained were enormously swollen; or the epithelia, the macula germinativa, and the vesicula germanitiva were broken down into granu-

lar matter, changing into inflammatory corpuscles. In some ova the work of destruction was still farther advanced by the yolk being changed to fibrous connective tissue. In many places in the periphery of the ovary the only remains of an ovum, or of closely packed groups of ova, were clusters of inflammatory corpuscles, changing to fibrous connective tissue.

The ova showing these various stages of retrograde progress were in the midst of newly-formed myxomatous tissue, which was again taking on a new inflammation, or changing to inflammatory corpuscles, other portions to fibrous connective tissue. What was more striking still, many of the ova were being penetrated by the newly-formed myxomatous tissue, and soon there would have been left not a vestige of the original ova.

The indications were that this woman, but for the changes in the ova, would, before the more serious advance of the disease, have been capable of bearing chil dren.

Diseased ova were next found in a patient who had pyosalpinx, and who, during her whole nine years of married life was sterile. Apart from the salpingitis, the condition of the ova would have been a sufficient cause of infertility. Some of them were in a state of intense acute inflammation; some were in fatty degeneration, shriveled, or so atrophied that there was not one anatomical element of the original ova to be found. In one field of the microscope I counted as many as fifty, all shriveled and partly waxed. No treatment or medication could have brought these ova back to health or normal activity, consequently, even apart from the salpingitis, nothing could have cured the patient's sterility.

How or why these interesting organisms should become affected is not understood.[1] They are frequently so found in comparatively young women; so in early life must commence some of the causes which bring this terrible after-harvest of diseased ova, sterility and ill health.

Mrs. A—— and Mrs. F——, both young women, both sterile, both had diseased tubes, and the ovaries of each contained ova in colloid degeneration. In some the yolk, the germinativa and the epithelia were transformed into colloid corpuscles. In others the entire center of the ova was a colloid mass.

Such colloid lumps were found in great numbers in the muscular fibers, cyst-walls, invading the ova, and even scattered among the pigmented corpuscles of a recent menstrual follicle. They must be of some significance, or a cause of disturbance, as all the women in whose ovaries they were found had a history of suffering, and most of them were sterile.

Mrs. X——, when first married, was strong and in perfect health, had two children, since which time for more than ten years she has been sterile, suffering locally and constitutionally from disease of the uterine appendages, also by reflex irritation, her mental conditions were at times disturbed. The ovaries and tubes on both sides were enlarged, sore, sensitive, and prolapsed in Douglas cul-de-sac. They were removed, and subsequent microscopical examination showed that there was subacute oöphoritis, and the ova were found in all stages of inflammatory action, many advanced to waxy degeneration. In one follicle there were four ova, and all waxy.

Another patient who had been sterile for years, and although the ovary was almost entirely destroyed by an endotheliomatous growth, yet at one period it was the diseased ova that caused the sterility.

XI. *Disease of the Ovaries.*—In disease of these organs we find many and varied causes of infertility. Besides abnormal ova we have acute, subacute, chronic and interstitial oöphoritis, benign and malignant growths, and, as an outcome of the previous existing disease, dislocation of the ovaries.

Acute, subacute, chronic or interstitial oöphoritis, when intense, will change any and every structure of the ovary; the smooth muscles will be transformed into fibrous connective tissue, producing more or less scirrhous of the organ, which necessarily interferes with the functions, and consequently will be a cause of sterility.

In the normal ovary there is a vast amount of muscle-tissue, placed there for some purpose, possibly to help in maturing the follicles of De Graaf, or to help their growth toward the surface, or to help in the extrusion of the ova.

[1] I am still pursuing my microscopical investigations to understand the etiology and pathology of diseased ova.

Dislocation of the ovary is also a cause of sterility, as it prevents the easy coaptation of the ovary with the tubes. But as the dislocation most frequently results from oöphoritis, or the consequently hyperplasia, or from abnormal growths, these are really the cause of the functional incapability.

A more serious cause of sterilty is the formation of pseudo-membranes covering the surface of the ovary, as illustrated in Fig. 5, in "Microscopical Studies in Peritonitis." Such pseudo membranes, or dense fibrous connective tissues, result from salpingitis, oöphoritis, or local peritonitis, and will prevent the exit of the ova from the ovary. These little organisms, of microscopic smallness, carrying their wonderful load of living matter with its vast capabilities and powers of growth, when they start on their perilous journey from the ovary to the tubes, may meet with yet greater difficulties, even insurmountable obstacles in the dense membranes that may develop, bind down and close the tubes; thus many of these little creations, these marvelous masses of living matter, are lost and perish.

Schroeder speaks of "the external migration of the egg;" that is, its passage from one ovary to the tube of the opposite side. But can the ova make the supposed journey? Have they any way of locomotion or means of progress? If it takes ten or fifteen days for one to pass through the Fallopian tubes, it would be months in making such a voyage as this, a voyage so full of pitfalls and so perilous that scarcely a single ovum would ever safely pass to the end of its Don Quixote expedition.

Is it more likely that the countless millions of cilia in the tubes create a current sufficiently strong to draw the egg into its pavilion, or into the fimbriated extremity of one tube or the other; and then by peristalic action of the tubes the egg is floated or blown along. Or, probably, the Fallopian tubes, with their wonderful muscular structure and marvelous capability of motion, may fix themselves first upon one ovary then upon the other, so that an egg from one side will pass through the tube on the opposite. This is not improbable, and may explain what is supposed to be the "external migration of the egg." The Fallopian tubes have wonderfully thick layers of muscles, both longitudinal and transverse—a richer supply than have the walls of the alimentary canal. It has been demonstrated that they have in their walls five layers of muscles instead of three, the number usually given by anatomists. So the Fallopian tubes are capable of varied and extensive movements, and either one may fix itself upon the ovary of the opposite side.

Of all cases of sterility, the diseases of the Fallopian tubes are by far the most frequent and the most serious. The health of no organ is more essential to fertility. The uterus may be lacerated, unlacerated, anteflexed, retroflexed, enlarged, displaced, cancerous, or the seat of fibromatous growths, yet, if the Fallopian tubes are healthy, conception is possible. The ovaries may be dislocated and the seat of varied forms of degeneration, the woman hysterical, have painful menstruation and pelvic pains; yet, if the carriers of the egg are healthy, all may be well. I have seen a healthy ovum in the midst of a sea of ovarian disease; such an ovum, if the tubes are all right, may accomplish its full destination. But when the tubes are diseased, the mucosa thickened, swollen, or converted into masses of inflammatory corpuscles, the walls changed, its muscular structure destroyed, the fimbriated extremity closed, and possibly the whole tube converted into an abscess, it is impossible for them to perform the function. They are physiologically dead. The woman is completely and forever sterile. As well talk of one who is stone-blind seeing the fine colors of the rainbow.

Hopeless disease of the Uterine Appendages on one side, and sterility cured by their removal.—One often observes in performing laparotomy, that the uterine appendages in one side are much more profoundly diseased than those on the opposite, also, unmistakable evidence that the disease has existed a longer period; indeed, those on one side may be almost normal, while those on the opposite may be so profoundly diseased as to be incapable of cure or functional activity.

It is also a fact, that if one set is seriously affected, this disturbance will not only interfere with and probably prevent the more healthy ones from performing their functions, but will, sooner or later, involve them in similar conditions; consequently, removing the more diseased organs will give the others a chance of becoming healthier, more vigorous, and more

capable of accomplishing their special duties; and thus, a woman who would otherwise remain sterile, may, by this operation, be enabled to bear children. So, oöphorectomy and salpingectomy will, in some instances, cure sterility.

Mrs. K—— came to the dispensary of the Woman's Hospital, suffering in general health, pain in the pelvis, and evident disease of the uterine appendages, and was sterile.

The uterine appendages on one side were much more diseased than on the opposite. We judged, removing the more diseased organs, that the less diseased would grow more healthy, and, for awhile, at least, be able to perform their functions. The operation was performed April 16, 1889, by Dr. Charles N. D. Jones. The patient made an excellent recovery, and was continued under special treatment till June 26 of the same year, when she left the hospital. On June 20, 1890, she was delivered of a healthy female child. August 3, 1891, she was delivered of a second child, and without any indications of strain on the abdominal walls. This child was a male, proving, at least, that the ovary does not decide the sex. The patient is still in excellent health, with probabilities of having several more children.[1]

If the uterine appendages which were diseased had not been removed, they would in time have affected those on the opposite side, and thereby hopeless sterility would have ensued. By the operation the patient was relieved of pain, restored to health and made fruitful.

The advantage of a unilateral operation, as to fruitfulness, is often illustrated in the removal of a cystoma, after which, as repeatedly proved by clinical experience, a woman who was previously sterile, is capable of becoming pregnant.

CONCLUSION.

Sterility results from disease or defective formation. The indications are to cure the disease and correct the defects.

[1] An instance is given of a woman who had the uterine appendages only on one side, yet she had nine children. I have counted in one microscopical section of an ovary one hundred and fifty four good ova.

The Medical Digest.

PREGNANCY AND GOITRE.—Joffroy (*Union Méd.*, May 10, 1892) sums up the experience of others on the relation of pregnancy to simple and exophthalmic goitre. The appearance of simple goitre in pregnancy and child-bed has been noted by Tarnier, Lawson Tait, and other authorities, and the simple local disease may develop into exophthalmos. A patient of Joffroy's came from a Swiss canton where endemic goitre did not exist, but where he had himself observed three cases of exophthalmos. She was free from goitre when she married, at the age of nineteen. At her first pregnancy a goitre appeared, during the second it increased, and in the course of the third, palpitations set in. During the fourth pregnancy all the symptoms of exophthalmos were observed. Simple goitre usually diminishes or disappears after delivery. The above experience shows that to become pregnant is not a necessary cure for goitre; on the contrary, a worse form of disease may develop. It is true that exophthalmos usually subsides after delivery, but, on the other hand, even a simple goitre may grow so large during pregnancy as to call for the induction of labor.—*British Med. Jour.*

THE IMPORTANCE OF EXAMINATION OF THE GENITAL TRACT DIRECTLY AFTER LABOR.—In a short paper some time since I endeavored to point out the obvious advantages of flushing the uterine cavity with hot water directly after delivery, and my reasons for adopting such a proceeding.

I now wish to draw attention to the still more important point of making a close examination of the genital tract for any injury which may occur (more especially in primiparæ during the process of parturition) by both visual and tactile examination. The cervix uteri is frequently torn, the edges of the os lacerated, and the vaginal walls injured, leaving, perhaps, the perineum intact, and so the conclusion is oftentimes come to that "all is well," while considerable mischief may have taken place unobserved.

By the hot water flushing we get rid of several sources of danger, and, if a

thorough examination is then made for vaginal or cervical injuries, it will be a comparatively easy matter, when such are found, to draw together the torn surfaces in severe lesions with catgut sutures, and cauterize the parts in minor ones with strong carbolic acid, thus leaving the parts concerned in a better condition for repair and less liable to absorb. It will be obvious that at no other time subsequent to labor have we a better opportunity.

No objections will be raised by the patient, and acting on the old proverb, "a stitch in time saves nine," may save her from septic absorption with all its train of untold misery.

The comfort to the conscientious practitioner's mind (when such lesions are found) by treating them at once is no small recommendation for the adoption of this proceeding, while the no less pleasurable disappointment of finding that none exist (and which could not have been determined without examination) will also commend itself. As a general rule, the uterus is not washed out directly after labor, nor any examination made, except of the perineum. The consequence is, that in many cases where septic symptoms develop, the true cause is never known, whether depending on a piece of membrane left to decompose in utero (which should have been removed by flushing before the binder was applied), or a lacerated cervix never discovered, or some tear in the vaginal surface, allowed, perhaps, for days subsequent to labor to absorb the morbid products of conception, and so, by permeating the patient's system, bid defiance to the best directed efforts of the practitioner. I am persuaded that in nine cases out of ten the septic symptoms in the lying-in patient are due to the causes I have pointed out in this paper. I may here allude to the danger (where no examination has been made of the genital canal) of endeavoring to combat the symptoms of septicæmia by syringing with corrosive-sublimate solution, for, should a torn or abraded surface exist (which, in my opinion, is almost a certainty), such surface, which, in the first instance, took up septic matter, is quite capable, as proved by some cases of severe burn treated with the corrosive solution, of absorbing it, and so contributing to, if not actually causing, the patient's death. —Duke, *Med. Press and Circular.*

A Piece of Dentistry.—One day, about noon, I was hurriedly called to see a boy, aged about ten or twelve, who had been thrown from a wagon. The back of his head struck the ground, his face being up, and the wheel of the wagon, which was rather heavy but empty, passed directly over his head and mouth, pushing out the two central and left lateral incisor teeth above. The alveolar process was displaced and pushed up the upper lip. I placed the three teeth in my pocket and had the boy taken to my office which was near by. The wound was cleansed with warm solution of listerine, and a pledget of cotton previously saturated with a solution of cocaine and carbolic acid was placed in each place from which the teeth had been knocked out. The teeth were cleansed and soaked in a solution of warm listerine. After a few moments the cotton was removed and the broken bone pressed back in place as accurately as possible, and each tooth was replaced and the patient sent home. The operation caused very little pain afterwards. He made a rapid recovery and the teeth are almost as tight as before.

There was also a wound through the lower lip, so that water taken into the mouth would escape through the wound. It was thoroughly cleansed and a piece of adhesive plaster placed over the wound externally. This healed entirely in three or four days. S. P. Thompson, M. D.
Shelby, N. C.

—*St. Louis Clinique.*

News and Miscellany.

Dr. Sajous Knighted.—Dr. Charles E. Sajous, Belgian Consul in this city, and editor of *The Medical Annual*, has been appointed a Knight of the Legion of Honor of France by President Carnot, for his services to the French colony and to science, as an American of French descent. Dr. Sajous went to Paris last May to translate his *Medical Annual*, and he expects to make Paris his home for the next three years.

President Carnot, of the French Republic, has sent a letter to Mons. Louis Vossion, French Consul at this city, asking him to return his (the President's) thanks to the Association Nationale Francaise, and to the French citizens of Philadelphia generally, for their telegram of congratu-

lations transmitted by them on July 14th, the day of the National Feast.

WEEKLY Report of Interments in Philadelphia, from July 23 to July 30, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	1		Homicide	1	
Alcoholism	9		Inanition		28
Apoplexy	23		Inflam'n brain	4	11
Anæmia	1	1	" bronchi	3	5
Bright's disease	14	2	" kidneys	1	1
Burns and scalds		2	" larynx	1	
Cancer	9		" liver	1	
Casualties	8	1	" lungs	11	10
Congestion of the brain	1	6	" pericard'm	1	1
Congestion of the lungs	1	1	" peritone'm	1	
Cholera infantum		188	" s. & bowels	16	19
" morbus	9	1	" spine	1	
Cirrhosis of the liver	4	1	Indigestion		1
Consumption of the lungs	42	10	Marasmus		52
Convulsions	2	29	Measles		2
Croup		2	Obstruction of the bowels	1	
Cyanosis		9	Old age	39	
Debility	7	9	Paralysis	15	1
Diarrhœa	8	6	Rheumatism	3	
Diphtheria		23	Shock, surgical	2	
Disease of the heart	21	4	Septicæmia	3	
" " spine		1	Softening of the brain	2	
" " liver	2		Suffocation		1
Drowned	3	3	Suicide	2	
Dropsy		1	Sunstroke	27	1
Dysentery	12	4	Syphilis		2
Epilepsy		1	Tabes mesenterica		2
Erysipelas		1	Teething		7
Fever, malarial	1		Uræmia	2	
" puerperal	1		Whooping-cough		7
" scarlet		5	Wound, knife	1	
" typhoid	3		Total	323	463
Gangrene	3				

OF THE FOREGOING THERE WERE:

Under 1 year	338	From 40 to 50	38
From 1 to 2	57	" 50 to 60	45
" 2 to 5	29	" 60 to 70	47
" 5 to 10	13	" 70 to 80	49
" 10 to 15	12	" 80 to 90	31
" 15 to 20	14	" 90 to 100	8
" 20 to 30	43	" 100 to 110	1
" 30 to 40	61		
Total			786

The number of deaths, compared with corresponding week of 1891 and of last week, was as follows:
Week ending August 1, 1891, was 427.
Week ending July 23, 1892, was 546.

By order of the Board of Health,
MOSES VEALE,
Health Officer.

Attest:
J. V. P. TURNER,
Chief Registration Clerk.

ARMY, NAVY AND MARINE HOSPITAL SERVICE.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from July 25 to August 1, 1892.

Captain William O. Owen, Jr., Assistant Surgeon, U. S. Army, leave of absence extended fourteen days.

Changes in the Medical Corps of the U. S. Navy for the week ending July 30, 1892.

LOVERING, P. A., Surgeon. Ordered to the Marine Rendezvous, Boston, Mass.

University of the * * City of New York,

MEDICAL DEPARTMENT,

No. 410 East 26th Street,

Opp. Bellevue Hospital,

NEW YORK CITY.

FIFTY-SECOND YEAR, 1892–93.

The Collegiate Year consists of a SPRING TERM, which begins March 30, 1892, and ends June 1, 1892; and a WINTER TERM, which begins Wednesday, September 28, 1892, and ends March 31, 1893. An obligatory three years' graded course has recently been established.

The FIRST YEAR comprises recitations in the primary subjects, dissection, laboratory work, urine analysis, etc.

The SECOND YEAR comprises lectures in the primary branches, recitations, laboratory work, and clinics in general medicines and surgery.

The THIRD YEAR comprises lectures in the practical branches, clinics in general and special subjects, and instructions by Sections at the bedside in the wards of Bellevue Hospital, and attendance upon obstetric cases in out-door practice.

The ample Laboratory Dispensary and Hospital facilities at the disposal of the College enable the Faculty to offer to each student unusual advantages for practical work and bedside instruction.

—FEES.—

For Course of Lectures	$150 00
Matriculation	5 00
Demonstrator's Fee, including material for dissection	10 00
Final Examination Fee	30 00

For further particulars and circulars address the Dean,

PROF. CHAS. INSLEE PARDEE, M.D.,

UNIVERSITY MEDICAL COLLEGE,

410 East 26th Street,

New York City.

The Times and Register.

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PAGE

ORIGINAL ARTICLES:
PULMONARY ATELECTASIS AS A CAUSE OF ANEMIA. By Albert Abrams, M.D. - - - - - - - 187
SIX PUERPERAL CONVULSIONS IN HALF AN HOUR —RECOVERY. By Dr. O. McLeod Smith - - - - 189
EDITORIAL:
SPECIAL NUMBERS - - - - - - - - - - - - - 191
LET US HEAR BOTH SIDES OF THE QUESTION - - 191
SHALL IT BE A NEW CODE OR NO CODE? - - - - - 192
ANNOTATION:
Professional Methods and High Ideals - - - - - 193
LETTERS TO THE EDITOR:
Effects of Shock by Electric Wire and Treatment. *McCann* - - - - - - - - - - - - - - - - 193
As to the So called "Dry-cell Batteries." *Blackwood* - - - - - - - - - - - - - - - - 194
Cholera Not Necessarily a Fatal Disease. *Shade* - 196
Bilious Malarial Fever. *Wesselowski* - - - - - - 197
Enlarged Testicle and Rupture. *G. R. M.* - - - 197
Miscarriage. *Coates* - - - - - - - - - - - - - 198
Summer Diarrhœa. *Mardorf* - - - - - - - - - 198
Dr. Waugh's Emergency Case. *Hancock* - - - - 198
Correction. *Bing* - - - - - - - - - - - - - - 198
THE MEDICAL DIGEST:
Prevention of Diphtheria from Spreading (*Smith*)—An Adder's Bite and its Consequences (*Nature*)—Therapeutic Application of Yawning (*Medical Record*)—The Uric Acid Diathesis in Children (*New York Medical Journal*)—On Graceful Retreating (*Maryland Medical Journal*)—The Empirical and Superstitious Curative Treatment of the Indians (*Gorton*)—Cholera, Treatment of (*The Therapeutic Review*)—Incontinence of Urine (*Med. and Surg. Rep.*)—Leg Ulcer (*Weismueller*)—Butyl Chloral for Facial Neuralgia (*The Physician and Surgeon*)—Treatment of Lupus Erythematosus of the Eyelids and Face (*Brocq*)—Antiseptic Powder, Improved (*American Druggist*)—Treatment of Pneumonia by Injections of Turpentine (*Frank*)—Treatment of Goitre, Synovial Cysts, and Hydrocele by a Solution Composed of Iodoform and Ether (*Dury*)—Myxœdema (*Robin*)—Brown Sèquard's Solutions (*The Medical Press*)—Bryonia Alba (*Storrs*)—Baldness, Treatment of (*Whitla*) - - - - - - - - - - - - - - 190 199-205

PAGE

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—The Influence of Nasal Affections on the Respiratory Apparatus (*Chabony*)—On the Urticaria and Prurigo of Hebra in Children (*Saafeld*)—Extemporaneous Preparation of Glycerine Suppositories (*Pharm. Pr.*)—Phenacetine in Urinary Disorders (*Trail Green*)—Mercurial Sore Throat (*Schuster*)—On the Pernicious Influence Exerted by Insects in Certain Affections (*Correa*)—Formulary: Electuaries for Gonorrhœa (*Caspard, Beyrars, Deday*)—Injections: Astringent Injections; Injections of Sulpho-Carb. Zinc (*Le Progres Medical*)—Poisoning of an Infant from Inhalation of Air Charged with the Vapors of Carbolic Acid (*Boulobach*)—Abortive Treatment of Buboes by Welander's Method (*La Revue Medicalé*)—Syphilis in Nineveh and Babylon Among the Ancient Assyrio-Chaldeans, 700 Years B. C. (*Buret*)—How Cholera Arises and Propagates, and the Means of Opposing it (*Monod*)—Carbonic Acid Poisoning (*Quinquaid*)—Electro Therapeutic Notes (*Mosso*)—Coloration of Preserves by Electricity (*Kochler*)—Electricity in the Veterinary Art—A New System for the Production of Electricity (*L'Electrotherapie*) - - - - - - - - - - - - - - - - - - 205 209
MEDICAL NEWS AND MISCELLANY - - - - - 210
ARMY, NAVY, AND MARINE HOSPITAL SERVICE - - - - - - - - - - - - - - - - 212
NOTES AND ITEMS - - - - - - - - - - IV, X

Original Articles

PULMONARY ATELECTASIS AS A CAUSE OF ANEMIA.[1]

BY ALBERT ABRAMS, M.D.,
SAN FRANCISCO.

IN this paper I will discuss anemia, not as a substantive, but as a symptomatic affection. I have referred elsewhere[2] to cases of anemia occurring in individuals, the examination of whose lungs showed insufficient distension (atelectasis). Since then my observations have been supplemented by accurate blood measurements, which enable me to assert positively that atelectasis of the lungs is a frequent factor in the etiology of anemia. Atelectasis, or collapse of the lung, is often encountered as a physiological condition, and I have adverted to it in my "Manual of Clinical Diagnosis,"[1] as follows:

"Remembering that the tidal or breathing volume of the air amounts to only thirty three cubic inches, and the complemental air (which is the air taken into the lungs by forced breathing, in addition to the tidal volume) amounts to one hundred cubic inches, and, knowing that the average respiratory capacity of an adult is about two hundred and twenty five cubic inches, the conclusion is evident that, even in a state of health, the lungs are imperfectly aërated and in a condition of physiological atelectasis.

"My invariable custom before conducting an examination of the lungs is to have the patient make repeated forced inspirations. In this way I avoid many errors in auscultation and percussion."

I have particularized this matter for the reason that I have failed to find similar detailed reference to physiological atelec-

[1] Reprint from "The Transactions of the Medical Society of the State of California," April, 1892.

[2] Report of One Hundred and Sixty-three Cases Treated by the Pneumatic Cabinet, *Pacific Medical Journal*, September, 1891.

[1] "Manual of Clinical Diagnosis," Abrams, 1891.

tasis in our text-books on diagnosis. I can recall a number of cases where an examination of the lungs revealed dullness in one or both apices, and where an unfavorable prognosis was given in accordance with the physical examination. I can also testify, with chagrin, that these very cases, which I considered so unfavorable, continued well despite my inauspicious prognostications. These errors in diagnosis are examples of similar errors made by other physicians, and will continue to be made until pulmonary atelectasis is recognized as a physiological condition. I have repeatedly demonstrated patients to my classes in physical diagnosis who showed not only circumscribed dullness of the apices or borders of the lungs, but even, in fact, of an entire lung; and it was shown in these cases how, after repeated forced inspirations, dullness was supplanted by resonance. These cases were not recruited from bed-ridden individuals, in whom such a condition might be expected, but from ambulatory patients. There is no individual, however resonant his lungs on percussion, who cannot render them more resonant after repeated deep inspirations. If atelectasis is found as a physiological condition in robust individuals, how much more frequent is it in those individuals with incomplete thoracic development, who forego all hygienic influences which tend to promote proper respiratory activity? The occurrence of anemia with its concomitant symptoms in pulmonary atelectasis is not accidental, but almost constant. The blood is a definite living tissue whose chemical composition is almost constant. By means of the blood, the constituent elements of the body are furnished with the nutrient substances and the oxygen they require; both are derived from without—the former from the alimentary tract, the latter through the lungs. The entrance of oxygen into the blood is necessarily influenced by the vascular area exposed to the air, which in pulmonary atelectasis is, of course, diminished. The excretion of carbonic acid from the blood must, for the same reason, be impaired. Then, again, the excretion of organic matter during expiration is interfered with, the accumulation of which in the blood conduces to auto intoxication. The symptomatic complex of individuals with collapse of the lung, based on an analysis of twenty-five cases, is as follows: hæmoglobin (estimated with Fleischl's hæmometer) is reduced to 50 per cent. or lower; the red blood corpuscles are diminished in number. The reduction of hæmoglobin and in the number of red blood corpuscles is proportional to the area of lung collapsed.

Fatigue on exertion, shortness of breath, palpitation of the heart, loss of appetite, and constipation are the usual subjective symptoms.

On inspection, diminished movements of the thorax are noted. Percussion of the lungs shows diminished resonance throughout; the apices may show dullness on percussion, and circumbscribed areas of dullness are often found in the interscapular regions, particularly on the right side. The upper lobe of the left lung adjacent to the manubrium sterni is a frequent seat of dullness.

Auscultation shows on quiet respiration an absence of respiratory sounds over the dull areas, while over the entire lung the respiratory murmur is diminished. When the patient is instructed to take deep inspirations, atelectatic crepitation is heard. The diagnosis is usually easy; repeated forced inspirations cause a disappearance of the dullness and a reappearance of respiratory sounds. All my cases showed almost immediate improvement after the inhalation of relatively compressed air by means of the pneumatic cabinet. The improvement in pulmonary atelectasis was phenomenally rapid, and occurred in some of the cases after three or four sittings.

The color of the patients improved, the hæmoglobin and red corpuscles increased, and the subjective symptoms of anemia disappeared.

If relapses occurred, which were not infrequent, they were attributed in the main to neglect of lung gymnastics and a return to former modes of life. In a few cases nasal obstruction led to relapses. In this connection reference must be made to the investigations of Holbrook Curtis,[1] who demonstrated that all patients with nasal stenosis were anemic, and after removal of the obstruction the cases were cured.

In cases where nasal obstruction cannot be removed the simple expedient of

[1] *Journal of the American Medical Association*, August 3, 1890.

having the patient breathe through the mouth may be adopted.

Although I have used the pneumatic cabinet for the treatment of pulmonary atelectasis, I am thoroughly convinced that no special apparatus is required, if the patient is properly taught to make repeated voluntary forced inspirations.

In anemia of pulmonary origin the therapeutic action of chalybeates may be hastened by inhalations of oxygen. Oxygen is as essential an element of hæmoglobin as iron.

Sufficient oxygen for all practical purposes may be taken into the lungs, provided no atelectasis is present, and forced inhalations will prove of great value in the treatment of anemia, although not of pulmonary origin.

Oxygen is now commonly used as a therapeutic agent in many diseases. The oxygen of the blood is chemically united to the iron, and is not subject to the law of absorption, and in consequence the exchange of gases between the gases of the blood and those of the air vesicles occurs almost exclusively through the agency of chemical processes, and therefore independently of the diffusion of gases.

When pure oxygen is respired, the blood does not take up more oxygen than when atmospheric air is respired. Inhalations of oxygen, nevertheless, do good, and this good is effected, to my mind, not because pure oxygen is inhaled, but in consequence of repeated forced inspirations opening up normally collapsed lung areas and thus exposing a greater quantity of blood to the inhaled oxygen. The cachexia of individuals who suffer from cardiac valvular lesions is due largely to stasis in the lungs, the turgid vessels compressing the air vesicles. It can be shown that the blood of these individuals contains less hæmoglobin than normal, and that the hæmoglobin increases when the collapsed lung is opened by voluntary forced inspirations.

I know of no more simple means of relieving the dyspnœa of non-compensated valvular lesions under certain circumstances than by the inhalation of compressed air, the object being to dilate the collapsed areas of lung.

The following conclusions may be formulated:

1. Physiological atelectasis of the lung is a frequent condition.

2. It may be readily diagnosed by the presence of circumscribed areas of lung dullness, which disappear after repeated forced inspirations.

3. Physiological atelectasis of the lung is frequently associated with anemia.

4. In all cases of anemia of obscure origin, examination for physiological atelectasis of the lung should be made.

5. Anemia, due to physiological atelectasis, may be cured after inflation of the lungs.

5. Forced voluntary inspirations are an excellent substitute for inhalations of pure oxygen, and are of great value in anemia from whatever cause.

SIX PUERPERAL CONVULSIONS IN HALF AN HOUR—RECOVERY.

By DR. O. McLEOD SMITH,

PALMYRA, VA.

I WAS called very hurriedly on June 22, 6 A. M., to see Mrs. I—— in labor; she being a primipara—the cause of the excitement at the beginning, for they are always in great haste with the doctor with the first. I then had a ride of about ten miles before I could reach the bedside of the expectant mother. I arrived about 7.30, when I found my patient complaining very much of her back.

Digital examination revealed a vertex case in first position—os rigid. Gave chloral hydrate, gr. xv, which relieved the backache very much and also helped the os to dilate readily. Labor progressed exceptionally well for a primipara, "pains," or, rather, uterine contractions being perfectly regular, but rather short in duration. At 11.10 she was the mother of a large, well-developed, ten-pound boy; no laceration of perineum, and no more of the cervix than is always found in the little "nicks" around the external os after the first delivery. Placenta was delivered in about half hour—hemorrhage right profuse, but not alarming. Gave 30 ♏ fl. ex. ergot as head was born. Everything seemed to be all right then. Dinner being ready, I walked in and ate my dinner and walked back to the room where my patient was, inquiring naturally about the "wasting" (as they understand it), head symptoms, etc., each answer coming in the best way. This was about 12.30, and, being my rule to stay with patient an hour and a half after de-

livery, I was fixing to go on to other patients. About 1 P. M. she says: "Doctor, my head hurts, and I can't hold my hands still." I knew what I had to deal with then. I looked, and my patient was in a convulsion. A doctor's imagination will never tell him what a puerperal convulsion is, but can only be known in reality when he is far away from a brother doctor and in the awful dilemma of treating the dread affection alone; but, if he ever had any medicine in his head, it will quickly show itself or will have gone he knows not where. With a half dozen friends screaming and halloing and pulling the doctor's coat-tail, and everything else to do and think of himself, it is little wonder that he has any sense at all. I quickly cleared the room of all these, only enough to help, and went to work for my patient. Knowing that convulsions coming on so long after labor were the most serious form, I recognized that my work must be systematic and scientific in every respect, or my patient would soon pass to another shore, where doctors cannot reach. (I mean they cannot practice medicine across there and bring patients back.)

Now, what must I do?

I gave her a hypodermic injection of morphine sulph. gr. ss, followed by pilocarpine mur. gr. ⅛ by same channel. In fifteen minutes it seemed that my remedies had had little or no effect, when I gave of morphine sulph. gr. ¼ and atropia sulph. gr. $\frac{1}{50}$ hypodermically. In fifteen minutes my patient was in a profuse perspiration and sleeping. During the first fifteen minutes I bled her from median-cephalic vein about 8 oz, thinking that enough with the amount lost before I stopped. I did not use chloroform because I had no time to do it, and were I by myself again, I would not use it unless I had more time, but would use more permanent remedies. I had two reasons for giving chloral at the beginning, *viz.*, to help dilate that rigid os and to cause free urination, which it did, it being the best and most certain remedy I have yet used for albuminuria. When my patient awoke at 3.20 P. M., she called for water. I then gave her chloral hydrate gr. xx and bromide potass. gr. xxx, and continued it every two hours for twelve hours, when I considered my patient safe. I then put her upon ergot and quinine to take and hot water and carbolic acid as a vaginal wash.

In two weeks she made a good recovery and is now well. I think my large dose of morphine and my pilocarpine cured her. Will be glad for the editor or any brother doctor to give his views. Was not spoken to before I was called to deliver her.

DIPHTHERIA is prevented, in a measure, from spreading, according to Dr. J. Lewis Smith, by keeping a quart of water containing two tablespoonfuls of the following solution simmering on the stove in the sick room:

℞.—Acid carbolic,
Ol. eucalypti.....āā ℥j.
Spt. terebinth..... ℥viij.

AN ADDER'S BITE AND ITS CONSEQUENCES.—The historical accounts of the death of Cleopatra are vividly recalled by the following realistic account given in *Nature* of the symptoms following a bite by an adder, contributed by a gentleman who was unlucky enough to find himself enabled to furnish reliable details, which does not increase one's desire to repeat the experiment. The adder "went" for his thumb, and, although he followed Queen Eleanor's heroic example in his own person, the arm and hand soon assumed phenomenal dimensions, followed by a peculiar taste in the mouth, and, *horresco referens*, by a sensation of "swelling in the teeth." This must be a feeling at least as distressing as it is unprecedented; but if the swelling in the teeth was a subjective phenomenon, that of the tongue was unpleasantly objective. The next series of symptoms comprised excruciating pains in the "stomach and heart," not to be described by words (probably on account of the tongue being too voluminous to move), and for two days the arm rivaled the leg in size. It is with a feeling of positive relief that one learns of the victim's ultimate recovery, and one's satisfaction deepens into admiration on learning that, instead of destroying the reptile at once with premeditated ferocity, he has given it a local habitation and a name, and feeds it methodically with small frogs. He should, however, have a care, lest the fable of the man who took a frozen serpent to his bosom receives a practical application in his person. Vaccination in this case probably does not insure immunity.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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PHILADELPHIA, August 13, 1892.

WE have in preparation a special number devoted to Health Resorts for Consumptives. We should like to hear from all parts of the country, but especially from resident physicians in the Southern Rocky Mountains regions, and the Southern Appalachian regions. The articles must not be in the nature of advertisements of hotels or private sanitaria. To be entitled to the fullest confidence, articles should candidly acknowledge any marked disadvantages of the region for permanent residence, as disagreeable winds, dust, etc., malaria, liability to sudden cold storms, as "blizzards" or "northers," scarcity or poor quality of water, and any other disadvantages which the stranger is sure to find upon becoming acquainted with the country. Such things, fairly stated, usually do not deter the patient from going, but only prepare him for what he may expect. It is only the wild, vague, undefined rumors that prove a "bogie man," as, in the absence of accurate information, the patient fears that they may be a great deal worse than they really are.

A very important matter, which is nearly always omitted in articles on this subject, is the means of support in such localities. Most patients can only be benefited by permanent residence. Many wish to have their family and relatives settle with them. Very few, indeed, are able to live all their lives at an expensive hotel. Their first question is, "How can we make a living there? and what is the smallest amount of capital with which we can start in any kind of promising employment?" A brief, sensible consideration of this phase of the subject will add a great deal to the value of an article. In fact, brevity, completeness and clearness should characterize all the articles on the subject.

LET US HEAR BOTH SIDES OF THE QUESTION.

IN the May issue of the *International Journal of Surgery*, there appears an article from the pen of Dr. McFadden Gaston, of Georgia, late Chairman of the Section of Surgery, of the American Medical Association.

The doctor, after detailing in an able and interesting manner the technique for an operation, for resection of cancer of the rectum, after Kraske's method, actually tells us, "that his patient died."

This, indeed, is startling news; in these days, when we so often read of operations, practically impossible of performance, being always followed by cure. If the unfortunate man be by any means gotten outside of the hospital walls, with a breath of wind in him, his case is at once, set down, as a great success.

All honor to Dr. Gaston. Though we have not the honor of a personal acquaintance with him, we will venture to recommend him to the whole American public, as a safe and conscientious surgeon. Let us hope, that Dr. Gaston will soon be followed by many worthy imitators in this grand work of spreading the light; of giving us the dark, as well as the light side of their operative results. When a surgeon, after proper consultation with those competent to give an opinion, and

he himself properly skilled and prepared, proceeds with an operation, and has the misfortune to lose his patient, he should have no misgivings to publish the fact. Novelties and successes, it is true, the masses are looking for; but, we should strongly impress on the young and inexperienced, the danger of prematurely giving their adhesion to an operation, which has little else to recommend it, but its newness; and be a bit skeptical of those successes in classes of operations, which are not approved by the ablest authorities, in our profession.

SHALL IT BE A NEW CODE OR NO CODE?

IN connection with the late meeting of the American Medical Association, this query suggests itself.

Are we then to have a new code, or none at all?

The *New England Medical Monthly* set the ball rolling on this question, in an article, which appeared just before the Detroit meeting, entitled "A Question to be Answered." It asked, in a nut-shell, on what ground Dr. W. W. Potter could serve as one of the Trustees of the American Medical Association, when he was in active sympathy and a member of a society, which had openly repudiated and bid defiance to that Association?

The Judiciary Committee of the American Medical Association, supported by its members, responded, by expelling Dr. Potter from the Trustees, and by this act, practically expelling him from membership from the Association. Dr. Vanderveer, of Albany, in the same boat with Dr. Potter, inquired, to learn his status. This decision practically settles his status.

An immense victory for the old code, they shouted.

Not so fast!

Quickly after this action, a motion went through, which, in its operation, will shake the old organization, to her very foundation. A committee was appointed from the National Organization, the State Medical Society of New York, which is now in rebellion on the code question, and the New York State Medical Association, and it is supposed to amend or abolish the code. The new code won the day, though worsted at the start. There is no disguising it, that the specialists, as a body, want to wipe out the code. It appears that in New York, where the code agitation originated, the specialists and consultants, with a few rare exceptions, went in a body over to the new code faction; for by the provisions of this new product; physicians are permitted to consult with any legal practitioners, and by a rider, which was finally added, when it was amended; the consultant, when he is called, is permitted to continue his visits *ad infinitum*.

Now, we may seriously inquire, Is it desirable to revise the code, or throw it over, altogether? In this matter, we must be guided largely by analogy. It appears, that in New York City, since the new code was introduced, that more than one-third of the members of the regular profession, practicing there, belong to no medical society, at all.

There are two regular medical societies there, the "new coders" and the "old coders." Ten years ago it cost seven dollars to join the County Medical Society—initiation and annual fees—now, one can join for two dollars and have a free-lunch, thrown in, beside.

One feature, suggestive and well to notice, in medical society matters in New York, is the numerical strength of the rival organizations of regulars. The County Medical Society had the prestige of all the specialists and the three medical colleges; yet, we are informed, that the County Medical Association, which is composed almost exclusively of general practitioners, has now a thousand members.

Can the code be revised to the advantage of the profession? is the question to be solved.

If it can, then away with tradition and reminiscences and let it be consummated, the sooner the better. But, in the meantime, the profession can afford to move

slowly in the matter, and so act as to sacredly guard the interests and privileges of the yeoman element in the ranks, the conscientious, plodding practitioner; as well as advance the interests of the small minority of specialists, or those ambitious to crowd to the front, regardless of how they get there.

Annotation.

PROFESSIONAL METHODS AND HIGH IDEALS.

"APPROACH all scientific questions with cold, sober reason and realism; in all human relations, keep alive your warmest enthusiasm and your loftiest idealism."—*Prof. Nothnagel.*

It would be difficult to conceive a happier or terser synopsis of the motives which should animate a medical man in his double character as scientist and citizen. To hold himself aloof from theological possessions, to ignore the sentimental aspects of scientific problems, to emancipate himself from the bias of the schools and the conservatism of long-cherished belief—these are the duties which clamor for fulfilment on the part of every earnest and honest student of nature. Truth is his guide and goddess, and in his capacity as scientist not one whit of his devotion is due to any other divinity. Weighing all things, and following his reason with unfaltering trust, he may be assured that the painful overthrow of present convictions will be followed by abundant compensations, for the truth is never permanently destructive. Out of the chaos of opinion resulting from rigid and impartial investigation will arise a host of beliefs capable of sustaining the most destructive criticism.

—*Med. Age.*

[We fully believe that the above noble and lofty aims will be possible only when the department of medical science and practice is placed above the necessity of private reward and common commercialism by an adequate system of public endowment and organization.—J. J. T.]

Letters to the Editor.

EFFECTS OF SHOCK BY ELECTRIC WIRE AND TREATMENT.

WITH the advent of electricity as a motive power and for lighting purposes, accidents must frequently happen to the operators and others who may come in contact with the wires.

I am treating my third case of shock by electricity, and since there is nothing to be found in the various authorities on the subject, I thought my experience in those cases might be of interest to some of the readers of THE TIMES AND REGISTER.

My present case, a motoreer on the street car was struck by the falling of a trolley wire, and, as is usually the case, he had his hands on the brakes; so, as soon as the wire struck him, the current was formed and the man was knocked down. He remained insensible for a short time, and on returning consciousness he found he had entirely lost the use of himself; to use his own words, he felt as though he were having a nightmare.

After the lapse of from a half to a minute or two he regained control of the muscles of one side, but he still was hemiplegic. In the course of half an hour the paralysis left him in so far that he was able to move his body and limbs at will, but still there was no strength in the muscles, so that when he was helped upon his feet he would immediately fall.

Such is about the condition and history given when the physician arrives at such a case. On my visit to the present case I found him sitting in a chair and the history was as given above. He had been helped home, and on examination I found him in a state of anæsthesia, the breathing was labored and accompanied by an irritable cough, the pulse was slow and weak, eyes red and suffused with tears, and the pupils dilated, and the mental condition obtunded.

After the course of an hour this condition was succeeded by a general hyperæsthesia. He complained of extreme headache, neuralgic pains over the body, particularly on the limbs, a sense of fullness or weight over the eyes, pain on taking a long breath, profuse perspiration, a constant cough of a hacking character, and instead of an obtuseness of the intellect the mind became active; he talked

continuously, and was inclined to be sociable and jocular.

The next day he was able to walk about, but complained of lack of strength and a feeling of prostration, the headache, neuralgic pains and cough still persisted, and he was nervous and apprehensive of danger.

Those symptoms have gradually subsided, but the patient, after nearly three weeks, still complains of want of appetite and a feeling of debility.

The treatment I have employed has been purely symptomatic in each case, a hypodermic injection of strychnine, and a little stimulant if seen early during the stage of depression, and later morphine in sufficient quantities to relieve pain and quiet the excitement, and finally, with the subsidence of the acute symptoms, general tonics.

If any one has anything to add in the treatment we would be glad to hear from him.

C. L. McCann, M.D.
St. Paul, Minn.

AS TO THE SO-CALLED "DRY-CELL BATTERIES."

THE communication from Dr. Sangree in The Times and Register for the 23d inst., in which he refers to the remarks made, some time ago, by Dr. Hutchinson concerning dry-cell batteries, leads me to make a few remarks on the matter, and I start by saying that "things are not always what they seem," in the classic language of "Pinafore;" also, that it depends on what angle you view a problem in reaching the result; in short, there are two sides to every question. Within the last six days, I have had three chloride of silver batteries sent to me for examination by the owners, who declared that they were unfit for use, and in two of them they were fresh from the factory; the second having never been used, and the first having been "renewed" after a fair life. Both of these were perfect. The other of the three was destroyed by sheer carelessness, through laying an ordinary Simpson's uterine sound on the switch-board, the included cells thus being short-circuited, and, of course, burnt out.

I took much interest in the Barrett battery, on its appearance, because it was a radical departure from old standards, and a good departure at that. Never till then had a battery been produced which was at once so portable, so clean, so reliable, so cheap at first cost, and so economical in renewal when worn out. Aside from the fact that its internal resistance made it less powerful in electro motive force than the usual styles, it had no defects that I knew of. The cells were of hard rubber, and were easily unscrewed by its owner for examination; after the transfer of the manufacture, however, to the new makers at Baltimore, the cells were changed in their build, and for the worse, in my opinion. I have been told that the rubber cells were discarded in order to prevent any one from repairing them, if so disposed; and, again, because the new style of construction was much cheaper. Both of these conditions are certainly true in themselves, for the build is cheap as compared with the original plan, and no one but the maker (with very few exceptions) can renew the cells when exhausted. At the same time, my experience with hundreds of persons has shown me that not more than 5 per cent. of all users know anything at all about electrical apparatus; they have to send the machine to the maker for the most trivial difficulties. I have fixed hundreds of batteries of varied descriptions in a few minutes, which had defied the efforts of their owners for months, and sometimes the skill of so called surgical instrument makers who pretended to repair such apparatus. In the case of the chloride of silver machines, it is simply fraud for ordinary instrument-makers to assert that they can renew the cells of the Barrett instruments; they cannot. In the battery referred to as being my first investment in this line, I have repeatedly renewed the elements, because the cells are easily handled; but with my latest style I have not yet had the opportunity to dissect the cell, and to thus discover its make-up. I have, however, several batteries at my disposal which are useless to the proprietors from being worn out, as they say, and some of these days, or nights, I will go at the problem, and see what there is in it. In discussing the question of wear and tear of batteries, there are these points to be taken into account: a galvanic battery will wear out in proportion as it is used—

1. In frequency;
2. In the length of the séances;
3. In the resistance employed in the circuit;

4. In the method of usage, *i.e.*, if used under proper rheostatic control, with all the cells in circuit, its life is evenly distributed as compared with the plan of coupling up a few cells here and there, thus generally wearing the proximal cells more than the distal ones;

5. In so-called "short circuiting."

If the battery is not destroyed by carelessness (No. 5), it will wear a very long time. I have used one of this make for about an hour daily for three years, and it is good yet. It depolarizes nearly as readily as the Leclanche does, under rest, and that is saying a lot for it. If not dropped on the floor or the pavement in transportation, it will wear out evenly, as it is not likely that any of the bars forming the anodes and cathodes would break; if one should be fractured, it is easy to drop that particular cell from the circuit by wiring those together on either side of it. (The broken one may be detected by a galvanometer.) The ordinary type of medical batteries cannot be ruined farther than the destruction of their internal electrodes either by ordinary wear or short-circuiting, and in both instances the resulting condition is the same—the elements only need renewal. In a "storage" cell the internal resistance is so extremely low as to make its short-circuiting a lightning discharge, and the whole affair may be blown up or melted. Not knowing how much the new style cell of the chloride of silver differs in internal resistance from the old, I am unable to say what the result of prolonged short-circuiting would be; as the cells are apparently covered with wax or a mixture of that nature, and as Dr. Sangree states that he found glass fragments in the melted mass, the cell is evidently fragile. It is possible, therefore, that a short-circuit could melt the cells by the developed heat and the pressure due to electrolysis of the electrolyte (not the voltage of the external circuit, but the expansion of the cell itself through the amperes developed in a circuit of practically no resistance at all). The only other way, to my mind, in which melting could occur, would be by exposure to external heat of a high degree, in which case the box and tray with its contents would be burned; neither could the cells be broken off from the binding-posts of the covering-plate without a fall, and here there would be no pasty mass formed, the cells would be simply detached from the plate or wires connecting the electrodes to the binding-posts.

Without at all doubting the opinion given by Dr. Sangree, I think the battery was short-circuited, as it is an easy matter for curious or careless persons to play with machinery which they do not understand (I don't refer to the doctor, but to outsiders), and this I have known done in the office of one of my most esteemed friends in the faculty of the Medico-Chirurgical College. I do not agree with what Dr. Hutchinson says about accessibility to the interior of batteries; the less most doctors handle the inside of their machinery, the better, unless they are mechanics and electricians. I do not mean electrotherapeutists; a man may be a good example of the latter, and know nothing whatever as an electrician. By careful use of any apparatus, it will last long; by careless use of it, nothing will stand; and it is just because of this fact that I value the Barrett chloride of silver battery so highly as I do. With proper care, it is indestructible; nothing that a physician needs from a battery will break it up. When run down, it is cheaply renewed, and then it is practically a new machine. I would not have in my possession a zinc-carbon affair with its dirty electropoion fluid for any consideration. With a well-chosen set of Leclanche cells ("Axo" type), of a hundred or more for your office work; a well-built differential set of faradic coils, actuated by Smee cells for the same work, and a combined Barrett chloride of silver battery for portable demands, you are in good shape for all that may come along. When I hear men talk of the expense they have to undergo every three months for repairs to their traps, and when I think that I spend less in ten years for keeping up my own outfit (which is twenty times or more larger than any they possess), I feel sorry for them, but that don't do them any good.

Before me, as I write is a combined 50-cell galvanic and faradic chloride of silver battery which has given me over six hundred hours work for all kinds of demands without renewal or difficulty. It was given to me as a testimonial by a "G. P." (Grateful patient—holy smoke! did you ever have one?) I don't ask anything better than that from the machine. Where is the battery of any other type with a longer record under similar circumstances!

The old style meter of this company is very imperfect, as are all so-called medical meters; they really are not "ampere-meters" at all, but "volt meters." The new style of horizontal meter which they have put on the market is not familiar to me, so I have nothing to say about it. Using meters for many other than therapeutic matters, I employ high priced arrangements, and they are the ones to have anyhow.

I have written the above in an impartial spirit, not wanting to take sides in this matter between the doctor and the makers of his battery. He has been unlucky, and I am sorry for it; but I know that in all my intercourse with Mr. Barrett when he had charge of the business, everything was done to make the physician satisfied with his purchase. I hope the people now handling the battery are doing the same for us. The batteries I now own were bought from dealers here and in New York, not from Baltimore; when, however, my new style batteries run down, I shall send the box to the builders.

Although neither Doctors Hutchinson or Sangree definitely named the Barrett chloride of silver battery as the one referred to, it is evident that it is the one meant; hence, I speak of it directly. A correspondent once made dreadful strictures on the habit so many reviewers have of praising all books they get hold of, and the poor victim kicked, because when he bought the book it wasn't at all worth having. Therefore, I think it right to say what you mean when growling; if I am wrong about this thing, then I take it all back. I am not wrong, however, for there is no other battery such as these gentlemen talk about in this country, and the Gaiffe make of similar construction is N. G. Electrotherapeutics is gaining ground all the time, and, as it is important that general practitioners should be supplied with apparatus that is manageable by them without irritating break-downs and costly expense, we must stick to apparatus that fills the bill; the chloride of silver battery is, so far, the best of all on the market. It should have a fair show on its merits.

As I said in beginning, I do not pretend that Dr. Sangree is wrong in his opinion that the battery was imperfect when he got it; it may have been injured in its travels, or it may have been spoiled by meddlers in some unknown manner. It seems, however, to have been short-circuited. The apparatus under consideration is, by far, superior to all others for the physician, and is used for testing by many electrical companies because of its intrinsic merits and its ability to bear rough usage. It is just as safe when put away upside down, on its side, or on either end, as when standing upright; no other cell can be thus used, despite hydrostats and other impedimenta. The new No. 8 faradic is extremely handsome and complete.

W. R. D. BLACKWOOD.
246 N. TWENTIETH STREET, PHILADELPHIA, PA.

CHOLERA NOT NECESSARILY A FATAL DISEASE.

CHOLERA in Asia is "Asiatic cholera," cholera in America is *American cholera*, and not "Asiatic."

While I heartily endorse all that Dr. C. W. Chancellor, Secretary of Board of Health for Maryland, says in his pamphlet entitled, "Prevention and Restriction of Cholera," I am persuaded that the chief cause of cholera is a susceptible condition of the muco-serous tissues of the physical system, superinduced by the retention of secretion and fermentation of feces detained in the alimentary canal. While it is highly important that every precaution should be exercised to stay the spread of an infectious disease, the fact should not be lost sight of that, unless there is an accumulation of the peculiar soil in the muco serous tissues, the germs of cholera cannot develop. In other words, if the bowels are well regulated, no engorgement or constipation allowed, no fermentation of food in the intestines, principally in the duodenum, it becomes an impossibility to develop cholera or any other infectious disease arising from a germ, for without *proper soil* to receive and develop the germ of a disease, negative results follow of a necessity. I am giving my thoughts and suggestions for the perusal and consideration of those of the profession who believe in the "germ theory." This has been my experience in twenty-one years general practice, more particularly in typhoid, typhus, and all other fevers, as well as scarlet fever, diphtheria, erysipelas, child-bed fever, etc. I prefer the hydragogue cathartics, *hydrargyri chloridum mite* in purgative doses, and repeated as often as necessary to accomplish the object, *viz.*, clean the tongue, empty the twenty-five to thirty feet of intestines. I have yet the

first time to do harm with purgatives in the early stages of infectious disease. If any one will explain to me how diarrhœa sets in, in typhoid fever, if not caused by retained feculent matter, producing ulceration of the bowels, commonly located at "Pyer's patches," I will explain how it is possible to have cholera develop in an empty alimentary canal, or how the husbandman could grow grain where there were no soil to receive and develop the seed sown. I know very well in all cases of typhoid fever, when I succeeded in emptying the bowels well, and clearing the tongue in the first week, there never was an attack of diarrhœa to come on, nor sequelæ to follow, which proves that the cause has been removed. In all these cases the attack was shortened. I have no more four to eight-week typhoid fever cases. I have said more about typhoid fever than I had intended, however, I hope the young physician will take a pointer which will make him a valuable reputation in the treatment of infectious diseases. Well, what should be done to prevent cholera? I would suggest flushing the bowels with a half gallon or more hot water thrice weekly during an epi demic or exposure, drink refined magnesia in a cup of hot water every morning on rising, and enough acid drinks to keep the system a little excessive acid, which it should be to enjoy health. If there is a coated tongue or a clammy taste in connection with constipation, several large doses of *hyarargyri chloridum mite* should be followed with magnesia or sulphate of magnesia in hot water in the morning.

I mean all I say, when I assert that no one would die of cholera if my suggestions are carried out, unless complicated with some other disease.

N. B. SHADE, M D.,
WASHINGTON, D. C., "THE LINCOLN," 101 H AND H, N. W.

ABOUT ten days ago I commenced to treat a case of bilious malarial fever, with little granules. I gave the following for about five days: Aconitine every fifteen minutes, until sweating freely; every fourth dose, a granule of digitaline. After the girl, aged fourteen years, took this for about three days, she would vomit considerably after taking the medicine. I then switched off to the trinity pills, made by the Ph. Dosimetric Co. The first two days, while giving the granules close together, I was able to produce a sweat; but, after that, thinking that the vomiting was caused by pushing the medicine, I gave it at intervals of one-half to one hour. I had a temperature of 102½ to 103½, and I could not get it lower. I then commenced on the old plan again—acetanilide, 2 gr.; sp. æth. comp., 5 ♏, and fluid extract of dig., j, to be given every hour, until sweating freely; then every three to four hours. It had the desired result, keeping the fever down to 101½. Now, I wish you would kindly tell me if it is my fault that I could not make the granules or the trinity do its duty. I feel positive that this will be the treatment of the future. I ordered Castro's book of Mr. Morrison, to see what he has to say in regard to treatment.

Again, I have been using your children's anodyne pill for a baby with colic. Not knowing how it would act, I ordered a granule every hour. (No effect.) I then told them to give it every half hour. (No effect.) They then gave sixteen granules in seventy-five minutes, but, to no effect. I then had the granules returned. How would $\frac{1}{67}$ gr. of morphine do in a baby three months old? How often would I have to give it?

JULIUS WESSELOWSKI, M.D.
JEWELL CITY, KANSAS.

[I would suggest in such a case granules of zinc sulpho-carb., 1 every five to fifteen minutes till stomach settles; a suppository of 20 grains quinine and arsenite of copper, 6 granules, gr. $\frac{1}{134}$ each, daily, for at least a week. Repeat, if needed, every other day. This is a specific fever, requiring quinine in full doses, the granules being simply adjuvants in such cases.
W. F. WAUGH.]

I AM taking THE TIMES AND REGISTER and am well pleased with it. I am in trouble and would like a little help. I have a case, young man with enlarged testicle and rupture with it. Shall I remove testicle? It is getting larger all the time. How shall I prevent hemorrhage? I had trouble once with that.

I have a case of hare-lip, a babe. When is the best age to operate, and would you give ether or chloroform for the operation?

I have a case, lady with tumor in right side, getting larger; not very tender. Is it ovarian? It is not painful and she menstruates all right.

I want a work on surgery, not too large, but all operations described; all the proceedures minutely detailed, and the best splints and bandaging.

Yours truly,
G. R. M., M.D.

THACKERY, ILL.

[Get Gerster's Antiseptic Surgery, or Wyeth's Surgery.

As to this first case, it is probably cancer, and, if so, the testicle ought to come out at once. The case is one that offers an opportunity for some skilful surgery, in removing the testicle and repairing the rupture. There ought to be no difficulty in controlling hemorrhage in this case, by hemostates, ligation or torsion.

The hare-lip should also be operated upon at once, but I would not use chloroform or ether.

The tumor may be ovarian, but as no description is given, it may be a hernia, aneurism, abscess, or cyst. As to operating, better first ascertain exactly the nature of the tumor; though a growing tumor is almost certainly a case for surgical interference. W.]

MAY I follow you to the mountainous regions of Pennsylvania, to ask a question?

A woman of about thirty-six years had a miscarriage four weeks ago, three months pregnant—supposed. Has had three pretty violent hemorrhages since: One four weeks ago, one one week ago, and another last night; fœtus discharged four weeks ago last night, and placenta the following day; both seemed to be whole; bleeds some most of time.

Her habit has always been to bleed freely and from the beginning of each period; is anæmic; farmer's wife, and works hard, when at all able.

Am much pleased with your article, "The Bedford Cure," in issue of TIMES AND REGISTER of 30th ult.

Very truly,
TRUMAN COATES.

RUSSELLVILLE, PA.

[Plug vagina firmly with antiseptic cotton, put patient to bed, raise foot of bed four inches, remove pillows from under head, give fifteen drops tinct. digitalis and a dram of vin. ergot every four hours. Use catheter to relieve bladder. Remove cotton in twelve hours, and the contents of uterus will probably be found adhering to tampon; if not, renew tampon once. If no result, curette or wash out uterus.

W. F. WAUGH.]

IN the June issue of the *Medical World*, I read your article on the treatment of summer diarrhœa, and wish to thank you for the numerous suggestions you offer. Up to the present, I had never used the sulphocarbolate of zinc internally, and its use as per your suggestion is to me a most welcome revelation.

I have not had opportunity to employ it much thus far, but the results have been sufficient in number to satisfy me as to its merits, and I will gladly use it when occasion offers.

I also wish to ask whether the doses of the combination of hydrastis, carbonate of potash and aromatic syrup of rhubarb are correct as printed. They appeared to me rather large, and I hesitated to use the combination on that account. I have not used the hydrastis internally, and did not like to give it in drachm doses before hearing from you. I enclose stamp for reply. W. C. MARDORF.

1302 CHOUTEAU AVE., ST. LOUIS, MO.

[R.—Potass. carbonat..... ℥ss.
Tr. hydrastis..... f℥iv.
Syr. rhei arom. .....q. s. ad f℥iv.

M.—S. f℥j for a child in second year, every two to four hours. W.]

IN THE TIMES AND REGISTER of July 16, is Dr. Waugh's emergency case. I am much pleased with his article, but I find one remedy noticed to which I am a stranger, and I cannot find anything about it. Please tell us what trinitrin is. Yours. respectfully.

CHAS. HANCOCK, M.D.

DENMARK, IOWA.

[Trinitrin is one of the various names for nitro-glycerine.]

YOUR compositor made an "interesting" mistake in the article on broncho-pneumonia, July 23, page 113, eighth line. The word should have been "intestinal." I think I wrote it plainly enough. It makes the whole sentence absurd. Yours truly,

E. W. BING.

The Medical Digest.

THERAPEUTIC APPLICATION OF YAWNING.—In certain affections of the throat, such as acute pharyngitis, catarrh of the Eustachain tube with pain in the ear, a Swiss *confrère* says that he obtains excellent results from making the patients yawn several times a day. It produces, it seems, almost instantaneous relief; the symptoms rapidly subside, and the earache disappears. Frequently the affection is cut short by this novel treatment. Yawning produces, as every one knows, a considerable distention of the muscles of the pharynx, constituting a kind of massage, and under this influence the cartilaginous portion of the Eustachian tube contracts, expelling into the pharynx the mucosities there collected. According to M. Naegéli, yawning is more efficacious for affections of the tube than the methods of Valsalva or Politzer, and is more rational than the insufflation of air, which is often difficult to perform properly. — *Medical Record.*

THE URIC ACID DIATHESIS IN CHILDREN.—It is well known that in infancy the urine frequently contains free uric acid, and that a deposit of urates is so common as to be almost regarded as normal. They may appear for a considerable time without producing appreciable symptoms. In childhood the continuous presence of uric acid is invariably accompanied by symptoms more or less distinctive. These symptoms are discussed by Sutherland, in an interesting paper published in the *British Medical Journal*, for April 23. The subjects of this diathesis, he remarks, are often easily recognized. They have small, restless bodies, and are precocious, excitable, and nervous, at times bright and cheerful, at others quiet and depressed. They sleep poorly, and wake early in the morning; they have dainty and capricious appetites. They take cold readily and perspire freely upon exertion. The feet and hands are usually cold. The pharynx is often relaxed and irritable, causing a harsh cough, most troublesome when the child goes to bed. The tonsils and the adenoid tissues of the naso pharynx are subject to inflammation, and are frequently found thickened and enlarged. The tongue is coated and the breath foul, and frontal headache is very common. Abdominal pain is common, and is not infrequently located in the right iliac fossa.

When uric acid is being excreted from the system, pain is one of the most prominent symptoms, and may be located in any part of the urinary tract. If the irritation is in one or both kidneys, the pain may be located in the back, passing downward or forward, or it may be felt entirely in the umbilical region. This pain is usually intermitting in character, and may be intense. It is accompanied by nausea and shivering. When the bladder it irritated by the crystals or by the excessive acidity of the urine, the pain is suprapubic and reflected along the urethra to the meatus. The greater the proportion of solid to fluid constituents in the urine, the more marked will be the pain. It is a characteristic of the subjects of this diathesis that they drink moderately but sweat profusely, the result being that the amount of urine passed is small. —*New York Medical Journal.*

ON GRACEFUL RETREATING.—Among the many practical lessons that are not taught in the schools is that of retiring in good order when vanquished at any point in a therapeutic contest against disease. Every young physician is, at times, humiliated almost beyond endurance by finding that his best efforts terminate in failure. Sometimes it is the obscurity of the disease which baffles him. Sometimes he has, with the ardor of a young recruit, been leading an assault upon an incurable disorder. Sometimes a slightly different therapeutic agent of the same class of drugs is the one really needed.

The experienced therapeutist has learned by sad reflection to snatch victory from the very jaws of defeat. If retiring daily before an invincible disease, he keeps his face to the foe, replaces each vanquished agent calmly and quickly by another of well tested virtue, and leaves no rows of half-empty bottles to mark, like unburied corpses, the line of his retreat. He neither, like the lover of newly imported and untried remedies, risks annihilation by rash charges; nor does he, like the therapeutic agnostic, withdraw into the fortified camp of inaction and leave the field to the enemy; but, realizing that his duty is to fight wisely, he ever keeps the field, whether advancing cautiously, or retiring with face to the foe and seeking to learn

the causes of his defeat. He will never "give up the patient's case, because nothing more can be done." Help comes sometimes from most unexpected sources. The "weather changes," bringing convalescence; or an attendant or relative suggests some local simple which meets the emergency, and takes its place forever after in the doctor's armamentarium; or, moved by unseen impulses, the patient, if hysterical, may take pity on the doctor and get well; and if he has retreated wisely and reluctantly before her superior tactics, and gained her respect, she will almost invariably so capitulate at the last moment, and will ever afterwards choose him as her physician.

As the reputation of some of the world's greatest generals has been gained by bravery and wisdom shown in retreating before a superior enemy, so the practice of many a family physician in a community has been founded by his devoted and unfailing attention in an apparently or really hopeless case.

Sometimes a consultation with a practitioner of greater age or more special skill in some particular department of medicine will bring the desired relief; and, indeed, we hold that in obscure cases the physician is in duty bound to call for such reinforcements. Yet, in the contest of therapeutics the practitioner usually stands alone. The obstacles which so stubbornly withstand him should be the agencies by which he is led onward toward the calm reflection, the keen discrimination, the unfailing moral courage, the fertility of therapeutic resource and the pervasive hopefulness of the perfect physician.

—*Maryland Medical Journal.*

THE EMPIRICAL AND SUPERSTITIOUS CURATIVE METHODS OF THE INDIANS.—Medicine as practised by Indians is thoroughly empirical, and the same may be said of the other inferior races, which constitute, of course, the majority of the human race. But the Indian has a system all his own, and some of his methods commend themselves for their innate excellence. The squaws often show an instinct that is remarkable, leading them to choose food that is best suited to a patient. When one of their number is suffering from a cold and fever, they restrict the diet, seek dark and well-ventilated places, drink water in which the acrid juice of certain roots and herbs has been mixed, eat a bit of fruit (melon), drink mare's or cow's milk—or, more probably, the whey from the sour, thick curds—and often plunge into the cool stream. When constipated, they feed fatty substances, giving oil or fat procured from animals or from vegetable substances, until the evil is remedied. Again, the coarse meal, or corn-grains, are burned or parched, and then pounded and made into a batter by mixing with whey or water, and a decoction of pepper-tea brewed and added, to be given in troubles of an opposite nature. Disease of any form, when once it goes beyond the skill of these not unskilled nurses, is looked upon as the work of the evil medicine-man—the malignant, bad spirit. This spirit is in the power and at the bidding of an enemy, and the good medicine-man, or witch doctor, is called in, and, by the aid of a mysterious magic, proceeds to find out what is the matter, and often pretends to take from the limbs, or the affected part, nails, pieces of bone and stone, or broken bits of obsidian, and proceeds to exorcise the evil spirit by many wonderful feats of magic. The fear of the unknown is the horror that hangs, in an unexplained manner, about their lives; and when it is displayed in their own person, in the form of epilepsy or convulsions, for which no natural causes can be attributed, it is to the evil spirits, who caused the seizure, that the evil is credited. They must be gotten rid of, and their medicine-men often proceed to very primitive methods to liberate the tormenting spirit: cauterizing the affected part with a hot iron, and, in some instances, it is said, as a last resort the skull has been trepanned by taking out a bit of the bone, to allow the malignant spirit to escape.

It is one of those fallacies with which history abounds, and which has been so often told and so vigorously reiterated, that it is generally accepted as a fact, that the red man is melting away before the march of the white man; but it is doubtful if the disappearance of the native aborigines is not due much more to the cause of amalgamation with the whites than to any other cause. Throughout the length and breadth of the Indian Territory, the number of full bloods in any tribe are very few, and many of the so-called Indians who receive subsidies from the Government are as white as their so-called "pale-faced" brethren. It is quite

a study to observe the predominant traits among these hybrids. The mother-lore —for the usual custom is the marriage of squaws to white men—will reappear at any time of great excitement; and the veneer of civilization is proved to be so lightly laid on, and the tendency to revert to savage customs and practise savage rites and observances so invariable, that it proves that the instinct of savagery may be lulled to rest, but not exterminated.

Perhaps there is no form of annoyance more troublous to endure than the constant attacks of the parasites that prey upon the savages, living as they do in regions where fleas, wood-ticks, and jiggers—not to mention unnamable insects —abound and infest the robes, blankets, and persons of the luckless human victims upon whom they live. Every old squaw knows the value of dust, mud, clay, and ashes in ridding herself and her family of parasites; and it is one of the amusing sights of camp life to see little black-headed, beady-eyed, clay-painted young ones run around in daubed nakedness, as innocent of the indecent as so many monkeys.

The oil of the rattlesnake is used as a medicine, and occupies a favored place in their list of pharmaceutical remedies. "At the dead snake shoot not the arrow, and walk not in the way of the living," suggests the reverence with which the symbol of healing is regarded. "Save no rattlesnake oil for him who rides with his nose behind him," shows that the prudent coward who is ever watching for the foe will not be in need of remedial agents. It is doubtful if his valor will ever receive a wound. There is one remedial agent which all of the aboriginals "shake" and "take" if it is at all procurable, and the result for the time makes of them "me big Injun," and does indeed cure chills and fever, but too often at the cost of all stamina and stoical endurance of the poor debauchee. The result is that all Indians, according to the code of the frontiersman, "are pison,"—another way of stating the old formula, "the best Indian is a dead one."

It is a generally conceded fact that the Indians were believers in the Great Spirit, the Manitou, or Takau Waku, before the advent of the whites, although Colonel Mallery, author of "Some Errors Respecting the North American Indians," in the bulletin of the Philosophical Society, Washington, D. C., asserts that "a better acquaintance with Indian traditions, and particularly with the etymology of its languages, shows that this is a great delusion." However, there can be no doubt of the fact of a belief in evil spirits, and of the fear the natives had of the shadows of ghosts of their dead ancestors. The bodies of the dead, therefore, were very carefully preserved; platforms were built up in the boughs of the highest trees, and the savagely prepared bodies of the dead of the tribe were preserved thereon. Great care was taken to appease the ghosts of the departed. Their ornaments that they prized when living, together with food, were placed on the platform with the body. If a ring dove flew from the direction of the burial place toward a member of the tribe, he was elected to have good luck. If, however, a crow came from the direction of the queerly constructed mausoleum, there was to be evil fortune—an inroad of enemies, sickness, or loss of game from the region of the encampment.

All of the hard toil—making the crops, preparing the skins for clothing, moving the tents, bringing in the game—falls on the squaws, and on them all of the rude nursing, until the patient is taken with symptoms which they fail to understand, and then the chief medicine-man is called. She also gathers the herbs for medicine, and wonderful is the knowledge she displays. Catnip, mint, grasses, wild leeks, ginseng, alicampane, the root of the mandrake (a virulent poison), Virginia rattlesnake weed, nervine, barks from various trees, various portions of the secretions saved from the slain deer, birds, snakes, and other game—all are used to assist in the curative process. Seated on the dirt floor of her tépee, or cabin, the industrious squaw will hold a pumpkin with her two little moccasined feet, clasping it tightly between the soles, and with a very poor carving knife cut off the rind. When the vegetable is free from rind, she puts it in the pot that hangs suspended over the open fire, after having first taken out some of the seeds, which are put in the sun to dry, and are then used in making tea to be used as a medicine. The dirt from the floor that clings to the pared pumpkin is itself said to be a valuable medicament.

The new order of things—a civilization which restricts the full sway of the old

forms of savagery—does not kill the instinct for the old forms when any sudden emergency arises that goes beyond the pale of their limited reasoning powers. Then the *tum tum* of the monotonous beat of the drum, the *ha ha* of the old Indian droned out as an accompaniment, and the various nauseous compounds of the Indian's limited pharmacy, together with such rude and cruel amateur surgery as suggests itself, are resorted to. The result, if fatal,—which it is almost sure to be in a case of severe illness,—results in a long and complicated series of accidents, very disastrous to the living, from the singular power of the dead person's spirit unless appeased ; and a long list of ceremonies must be complied with to secure immunity.

—Mrs. M. J. Gorton, *Pop. Sci. News.*

Cholera, Treatment of.—The following *rèsumè* is given by *The Therapeutic Review*, of Manchester, England: There appears to be an impending attack of this dire and typically infective disease, judging from the reports in the lay press as regards its European progress. Little has been discovered as to means of specific treatment, the comma bacillus notwithstanding; but from the symptoms and condition of those attacked, it may be taken that any medicines that will relieve pain and obviate the thickening of the blood, will assist towards recovery. Recently a number of observations on the importance of calcium salts in the process of blood coagulation have been published, and such medicines, for example, sodium phosphate and potassium oxalate, as would remove calcium combinations should have the desired effect on absorption.

A recent paper by Professor C. A. Peckelharing, of Utrecht, in *Virchow's Festschrift*, and other communications to the Academy of Sciences at Amsterdam, are much to the point. (See the *British Medical Journal*, April 23, 1892.) In our last issue, page 82, an abstract was given of Dr Mackintosh's treatment by intravenous injection of a saline solution containing rather more than the normal amount, *i.e.*, ¾ per cent., of sodium chloride and bicarbonate. Dr. Little, at the London Hospital in 1848-49, successfully employed in cholera cases saline injections amounting to as much as four pints; and again, Mr. L. S. Little in 1886-7. Of course it is well known that in cases of hemorrhagic collapse it is the loss of volume which must always remain proportionate to the capacity of the vascular system, independently, for the time being of the red corpuscles and the nutritive constituents of the blood, which causes the immediate danger, and if the depletion of the circulating fluid from either cause can be directly obviated, it would seem that saline injections are obviously the most expedient method.

We need not here insist on the absolute necessity of rigorous hygienic conditions, especially in respect of food and water, as being in a general sense prophylactic, nor enter into their details, for when an attack has to be dealt with, it must be done promptly. With this view we reproduce our articles in No. 4, page 52.

Dr. J. Carrack Murray, of Newcastle-on Tyne, after premising his qualifications in cholera from having had it twice, and seeing three epidemics of it, submits the following for trial:

"One drachm and a half of hydrate of chloral, 1½ drachms of bicarbonate of soda, 1 ounce of compound camphor tincture, ½ drachm of tincture of capsicum, ½ drachm of hydrocyanic acid, water to 8 ounces. One tablespoonful to be given immediately on seeing the case, and a dessertspoonful every fifteen to thirty minutes afterwards. Should collapse be present, the hydrocyanic acid must be omitted, according to the present theory of cholera. The second dose of the foregoing receipt will probably be retained, chloral being an anti-emetic; but should it be rejected, an ounce, more or less, in gum acacia solution might be thrown well up into the bowels. For the board like feeling of the muscles during cramps, flannels wrung out of warm water and sprinkled with strong solution of hydrate of chloral should be applied to the abdomen, over the kidneys, legs and hands, with such adjuncts as might be thought useful. Hydrate of chloral, discovered by Liebig when the first authenticated epidemic of cholera was raging in Europe, was not generally known until Dr. Otto Liebreich in June, 1879, by his pen, brought it from darkness into, perhaps, a too full blaze of light. Hydrate of chloral has not been given internally for cholera so far as I know. From its antiseptic, anti-emetic, anti-spasmodic, and other

qualities, it should be useful, and may be sufficiently potent to destroy the poison of cholera."

Dr. Reddie, of Unno, in Ooude, has administered chloral in one epidemic, but has now abandoned it in favor of chlorodyne, with carbolic acid one part, and tincture of iodine five parts, water four parts, ten minims to be exhibited by the mouth, or hypodermically, according to circumstances, every half hour.

Dr. J. Mortimer Granville suggests the use of the electric bath, in which the patient, whose bed is insulated, has the prime conductor of the electric machine applied to his body, and food and medicine administered to him with non conducting chinaware, without touching the body.—*Lancet*, July 28 and September 29, 1883.

Mr. H. C. Taylor, Jersey, proposes to inject the active principle of bile, bilin or taurocholic acid, in the form of its soda salt, as an adjunct to the treatment generally adopted. Arguing that in cholera the liver extracts all the bile from the blood without being able to discharge it into the intestine, and the intestine, were it supplied with bile, either by mouth or rectum, would be unable to absorb it, owing to its inflamed condition, he concludes that this absence of bile causes the thick and clotty state of the blood found even during life in choleraic attacks, and the fluidity would be restored by injection of the active principle of bile. Bilin is prepared from ox-bile, by first adding ether to extract the fatty matter. This is separated by decantation, and the residue is treated with acetate of lead, which forms the taurocholate of lead. After filtration, this precipitate should be suspended in water, and sulphuretted hydrogen gas passed through; from this the deposit of sulphide of lead is obtained, and the taurocholic acid (bilin) left in solution. After another filtration, the solution of taurocholic acid is submitted to the action of carbonate of soda, thus forming taurocholate of soda, the best preparation for the injection. This salt should be purified by crystallization. The quantity employed in the twenty four hours should be one hundred grammes, dissolved in a litre of water at the temperature of the blood (37° Centigrade); that quantity corresponds to the bile usually secreted by the liver.—*British Medical Journal*, July 14, 1883.

In the collapse stage, nitrate of amyl inhalations seem to have given satisfactory results; and we would add that for the onset of the attack, an heroic dose of infusion of capsicum, one drachm to the pint, with some salt added, as one draught has been asserted to be a complete abortive, and so also the administration of one large dose of boric acid, in other instances huge doses of bismuth subnitrate every hour have been relied on.

Dr. A. Harkin, of Belfast, has recommended stimulation of the vagus nerve, extending in the course of the pneumogastric nerves, as far as the angle of the lower jaw by the application of liquor epispasticus, so as to inhibit the action of the sympathetic on the abdomen, and found this treatment to effectually stop the cramps and purging without other medicine.

INCONTINENCE OF URINE.—

℞.—Tinct. nucis vomicæ..... ℥vj.
Ext. damianæ fl..... ℥iiss.
Glycerini..... ℥iv.

M.—S. A teaspoonful three times a day, after meals, in a wineglassful of water.

—*Med. and Surg. Rep.*

LEG ULCER.—Dr. Weismueller praises the action of a dusting-powder thus composed:

℞.—Acid salicyl..... ℈iv.
Acid borici..... ℈ij.
Zinci oxidi..... ℥ss.
Amyl,
Talc.....āā ℥v.

M. ft. pulv.

—*The Hospital Gazette.*

BUTYL-CHLORAL FOR FACIAL NEURALGIA.—Butyl-chloral has been proved to have an especial action on the facial or trigeminal nerve. Given internally in doses of from 1 to 3 grains, it has a marked effect in relieving painful neuralgias of this nerve. Professor Leibreich, of Berlin, prescribes it as follows:

℞.—Butyl-chloral..... gr. xl–lxxv.
Alcohol, rect..... f℥iiss.
Glycerini..... f℥v.
Aquæ dest.....q. s. ad f℥iv.

M.—S. From two to four teaspoonfuls p. r. n.

—*The Physician and Surgeon.*

TREATMENT OF LUPUS ERYTHEMATOSUS OF THE EYELIDS AND FACE.—Brocq recommends in this disease:

℞.—Salicylic acid..... ʒss.
Lactic acid..... ʒss.
Resorcin..... gr. xlv.
Zinc oxide..... ʒij.
Vaselin..... ʒxvij.

The following is also usually well borne:

℞.—Salicylic acid..... 1 part.
Pyrogallol..... 2 parts.
Vaselin..... 20 parts.

This is to be rubbed in at night. During the day the first named may be applied, the two thus being used conjointly.

—*British Journal of Dermatology.*

Antiseptic Powder, Improved.—Cheap but reliable substitutes for these expensive proprietary preparations, as well as for iodoform, however, are always in demand. The following formula is used largely in the hospital wards of a city institution in the treatment of chronic ulcers, suppurating sores, and generally as an iodoform substitute:

℞.—Salol, powdered..... ʒj.
Sulphite of zinc, powdered..... ʒiss.
Benzoin, powdered..... ʒss.
Purified talcum..... ʒij.
Oil of fennel..... ♏xx.

M. et sig.

—*American Druggist.*

Treatment of Pneumonia by Injections of Turpentine.—M. Frank reports a case of pneumonia of a very grave type cured by subcutaneous injections of turpentine. The patient, a woman of fifty, was treated by local bleeding, digitalis, etc., without effect apparently; there were large râles at the base, and fine crepitation over the remainder of the lung, the expectoration was purulent. Four injections were practised as a last resource, and, on the following day, a great improvement took place in the local condition as well as the general, and continued thus to convalescence. The usual hypodermic abscesses produced by the injections gave but little trouble. M. Thiery has used the same agent in the treatment of puerperal septicæmia; out of thirteen cases he reported twelve cures. The injections were made in the abdomen.

Treatment of Goitre, Synovial Cysts, and Hydrocele by a Solution Composed of Iodoform and Ether.—Tincture of iodine, as is well known, is the classical treatment of the above affections, but it has the inconvenience of being very painful, especially in hydrocele, the solution of iodoform is, on the contrary, almost painless. M. Dury employs a ten per cent. solution, and injects two or three drops in the base of the goitre; then, withdrawing slightly the needle, he inserts it into another point, and so on, until a few drops are placed in every direction. A rapid cure follows. In three cases of hydrocele thus treated the pain was little or nothing, and the result excellent.

Myxœdema.—M. Robin, taking a leaf out of Prof. Brown Séquard's book, treated a child of seven who was suffering from the above malady by injections of a liquid extract of the thymus gland. He prepared the solution by squeezing out the juice of the thyroid gland of a sheep preserved in a half per cent. solution of phenic acid; he made daily injections, and in eight days the œdema began to visibly diminish. Since then the child walks and speaks well.

Brown-Sequard's Solutions.—In speaking of Prof. Brown-Séquard, it may be well to state that he sends his solutions gratuitously to any medical man who desires them, on the condition that he encloses his card and describes the cases he wants to treat; a second supply can be obtained, if desired, but in that case a detailed description of the result of the former injections must accompany the request. The address is: Prof. Brown-Séquard, Le Laboratoire de Médicine, 12 Rue Claude Bernard, Paris. The learned professor speaks English perfectly.

—*The Medical Press.*

Bryonia Alba.—Dr. A. Storrs (Southport) has used this drug in pleurisy and acute bronchitis; also in pleuo-pneumonia with very good results. Unless the patients have been ill for several days before they were seen:

Tinct. aconiti..... ♏vj.
Aq. chloroformi..... ʒij.
Aq. ad..... ʒiij.

One tablespoonful every hour was given. To the second bottle he added tinct. bryoniæ ♏xxiv and gave it every two hours. In bronchitis or pneumonia he sometimes added three doses of ipecacuanha wine to the first bottle (about ♏xxx), and in most

cases where bryonia was used, after the two bottles had been taken, the temperature was either normal or about 100°. Bryonia is in large doses a hydragogue cathartic; in small doses it has a specific action on the pleura, and he thinks the lung also; it is antipyretic, acts on the liver, and is a good remedy in rheumatic affections. He thinks this drug is not appreciated as it should be.

—*Therapeutic Review.*

BALDNESS, TREATMENT OF.—One of the best combinations in the treatment of baldness consists of:

℞.—Pilocarpinæ hydrochloratis.....	gr. v,
Otto de rosæ.....	♏viij.
Olei rosmarini.....	f℥iv,
Linimenti cantharidis.....	f℥iv.
Glycerini puri.....	f℥i.
Olei amygdalæ dulcis.....	f℥ij.
Spiritus camphoræ.....	f℥iij.

M.—S. To be rubbed well into the scalp, night and morning.

—Whitla, *Ther. Review.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. BING, M.D., CHESTER, PA., TRANSLATOR).

THE INFLUENCE OF NASAL AFFECTIONS ON THE RESPIRATORY APPARATUS (Chabony).—The author considers in what measure may be attributed to the nose certain varieties of asthma, of cough, sneezing, laryngeal stridor and glottis spasms, and what part it may take in the causation of laryngitis, bronchitis, tuberculosis of the larynx and of the lung, scleroma of the larynx, thoracic deformity and pulmonary emphysema.

On the subject of asthma of nasal origin, he sums up the different opinions, and concludes that inflammation of the mucous membrane and obstruction of the nasal cavities form the point of departure of spasm of the respiratory muscles and paralysis of the vaso motors of the bronchial mucous membrane.

Those in whom these symptoms are met with are nearly always neurasthenic or gouty persons. Constitutional treatment is required as well as local measures. Pollen, nervous temperament, and alteration of the nasal mucous membrane are the principal factors in hay fever. The diathesis must be treated first of all, and then the local trouble.

Certain cases of cough, sneezing, laryngitis (stridulous), glottis spasm are the result of nervous irritation. Laryngitis and bronchitis consecutive to nasal lesions are not rare; they may result from extension of inflammation from the nose, or be the consequence of atmospheric conditions.

Tuberculosis of larynx or lungs may be consecutive to a descending tuberculosis, which commenced in the nose. Nasal stenosis favors this occurrence by interfering with the air supply of the lungs.

The nasal fossæ form a great barrier to the introduction of dust into the air passages. In mouth breathing much of this dust is carried directly into the bronchial tubes.

Nasal obstruction may also induce depression of the chest, giving rise to flattening or depression of its lateral walls. Pulmonary emphysema may be a consequence of nasal affections resulting in paroxysms of reflex asthma, whose starting point is in the mucous membrane of the nose.—*Revue de Laryngol.*

ON THE URTICARIA AND PRURIGO OF HEBRA IN CHILDREN (Saafeld).—Saafeld gives it as his opinion that the true prurigo of hebra is preceded in every case by urticarial eruptions, which are present during the first year. At the end of this year, or in the first half of the second year, are to be found in the midst of the urticarial eruption small papules, not larger than a millet seed, especially on the extensor surface of the limbs. As to prognosis, it is satisfactory. As to treatment, he recommends Wilkinson's ointment, or an ointment of 2 or 3 per cent. of naphthol, tepid baths, and baths containing tar.

In severe cases he thinks subcutaneous injections of hydrochlorate of pilocarpine might be successful. If there is derangement of the general health, the indications should be met. Especially should intestinal catarrh occur the treatment must be active. Basing his opinion on the thoretical deductions of Liebrich, he considers that cantharidate of soda or potassa might have a good effect on prurigo.

—*Bull. Gen. de Therapeutics.*

EXTEMPORANEOUS PREPARATION OF GLYCERINE SUPPOSITORIES (*Pharm. Pr.*, 1892):

Carbonate soda (anhydrous)..	1 grm.
Sleavine (shavings).....	2 grm.

Put into:

Alcohol..... 15 grm.

Heat on a water-bath till alcohol is driven off, then add:

Glycerine.....q. s. ad fl. 60 grm.

Heat again on a water-bath till it becomes limpid, and pour into the moulds. The above makes four suppositories, and the preparation takes about thirty minutes. The suppositories keep well and are elastic.—*Gas. de Gynecol.*

PHENACETINE IN URINARY DISORDERS (Trail Green).—In those urinary disorders which come on with advancing age, and which are due at once to prostatic hypertrophy and irritability of the bladder, phenacetine acts by calming this irritability, and permitting a longer retention of urine. This then acts as a distending force, and increases the capacity of the bladder (which from the irritation had contracted a habit of expelling the urine as soon as a few grms. of the liquid had accumulated, with a consequent reduction of capacity). It also perhaps acts in diminishing the production of urates, and thus lessens irritation, but does not affect the quantity of liquid.

—*Rev. Gen. de Med.*

MERCURIAL SORE THROAT (Schuster).—Sore throat in its several forms and degrees is a frequent affection when produced by cold, infectious diseases, or as a continuation of inflammation of the mouth or pharynx. It is often found in the secondary stage of syphilis, also in the specific treatment of the disease. Sore throat produced by iodide of potassium is well known, even from very small doses of the remedy, and is manifested as a simple inflammation of the tonsils, palate, pharynx, and sometimes of the larynx. But mercurial sore throat seems to be less well known. It is recognized that, in a mercurial course, the mucous membrane of the mouth and gums may easily become irritated, and the inflammation may extend towards the throat. The author has frequently observed during the treatment, sooner or later, a uni or bilateral isolated angina without visible irritation of the gums. It is announced by pains during deglutition, and a recurrence of disease in the tonsils is suspected. But if the anterior and posterior pillars are separated a purulent, sometimes bloody, secretion flows out, or, as is more often the case, on pressing against the tonsil caseous granules are detached. On removal of these the pain during deglutition ceases. By stopping mercurials the trouble is quickly cured; by continuing it constitutional symptoms may occur.

—*Rev. de Laryngol.*

ON THE PERNICIOUS INFLUENCE EXERTED BY INSECTS IN CERTAIN AFFECTIONS (Correa).—Correa divides into ten groups the diseases in which insects may exert a bad influence, as follows:

1. The great epidemic diseases—cholera, yellow fever, plague, malarial fevers.
2. The tubercular diseases.
3. Septic and "purulent" fevers.
4. The exanthemata.
5. The rôle played by insects in traumatic diseases.
6. Their action on cutaneous affections.
7. In the propagation of eye and ear.
8. Their influence in contagions of mouth and nose.
9. In venereal diseases.
10. In puerperal affections.

FORMULARY: *Electuaries for Gonorrhœa.*—First:

℞.—Powd. sweet almonds..... 24 grms.
Powd. catechu..... 2 "
Bals. copaiba..... 12 "
Powd. marshmallow..... 9.5 "
To be taken in twenty-four hours.

—*Caspard.*

Second:

℞.—Bals. copaiba ..... 30 grms.
Calcend magnesia..... 3 "
Powd. catechu..... 5 "
Powd. cubebs..... 40 "
Ess. mint.,
Ess. caneda..... .. ..āā 5 drops.
Dose, 10 to 20 grms. per day.

—*Beyrars.*

Third:

℞.—Bals. copaiba..... 12 grms.
Powd. cubebs..... 18 "
Powd. jalap..... 3 "
Powd. acacia..... 0. gr. 20 c.g.
Syrup roses cent..... q. s.
To be taken during the day.

—*Deday.*

INJECTIONS: *Astringent Injection:*

℞.—Powd. catechu,
Subnitrate bismuth .....āā 5 grms.
Rose water..... 200 "

Injections of Sulpho-Carb. Zinc:

℞.—Sulpho-carb. zinc..... 2 grms.
Rose water..... 200 "
Two to three injections per day.

—*Le Progres Medical.*

Poisoning of an Infant from Inhalation of Air Charged with the Vapors of Carbolic Acid (Bouloback).—A child of three months, transferred into a room which had just been disinfected (after a case of scarlatina), by means of a two per cent. solution of carbolic acid in water. At the end of one-half hour, after entering the room, symptoms appeared indicating clearly intoxication by carbolic acid. It became restless, then very pale; although it was removed from the room these symptoms were not dissipated, and soon diarrhœa occurred, the stools were of a dark green color, and the urine left greenish gray spots on the clothing. Under treatment, by castor oil, warm baths, and solution of acetate of ammonium as a diaphoretic, the child soon recovered.—*Revue Medicalé.*

Abortive Treatment of Buboes by Welander's Method.—This consists in injecting into the center of the bubo, by means of a hypodermic syringe, a one per cent. solution of benzoate of mercury, and then applying compression by a bandage. This must be done before suppuration occurs. A single injection in most cases is sufficient. Of the cases ninety-one per cent. and eighty-seven per cent., respectively, have been cured by the author and by Lebrick, of Odessa.

La Revue Medicalé.

Syphilis in Nineveh and Babylon Among the Ancient Assyrio-Chaldeans, 700 years B. C. (Buret).—W. W. Buret records a very interesting legend which has been deciphered from some tablets in the British museum, which were engraved in uniform characters by a scribe of Sardanapalus. "Isbar (Venus) goddess of criminal lore, of fertility, and of war, mother of gods and men, being seduced by the persistence of Izdubar (Nimrod) demanded of the hero that he make her his wife. The request was refused and he continued to hunt in the woods with his comrade Eabani, a male like to himself, for he could, without interruption, employ a whole week in 'dalliance' with his beloved (for the time). Isbar, furious, demands of her father, Anu, that he send, against the rebel to love, the sacred bull. But Eabani has no fear of ferocious beasts, he seizes the penis of the bull and points it at the figure of the goddess. Isbar is maddened with rage. The whole planetary system trembles; after twelve days of struggling Eabani is struck dead.

"As to Izdubar, attacked by a shameful leprosy, which caused his hair to fall off, covered his skin with scales, and with pustules that phallus (penis) which was the pride of Babylon, he descended into the infernal regions, where he became purified in the fountain of life."

Buret finds confirmation in this legend of the ancient origin of syphilis.

—*Progrès Medicale.*

How Cholera Arises and Propagates, and the Means of Opposing it (D. H. Monod).—Cholera arises in India, which country is its original seat; it is transported either overland or by sea. In the first case it ascends the Ganges to Delhi; crosses with the caravans the table land of the Himalayas; invades Afghanistan, Persia; extends itself along the Caspian Sea; infects Bakou, Astrakhan; reaches Tiflis; then finally Batoum, on the Black Sea. This has been precisely its present march. It may extend also into Mesopotamia, or Turkey in Asia; while on the north from Bokhara it may reach Ovenburg.

The route by sea is still more rapid. It is sufficient for a ship coming from infected India ports, and especially from Calcutta, carrying cholera cases, or even objects soiled by the dejections of cholera, to become the "brand which shall light up a conflagration," either on the passage, or at points at which it may touch, or in the port in which it may anchor, if it is not subjected to sanitary inspection and methods of disinfection. There remains to be considered in this connection a third factor, and that is the receptivity of the country, to which cholera has been carried, for the disease germs.

How does cholera increase in India? In the towns of India, in all of the presidencies Bombay, Madras and Calcutta, the density and filthiness of the dwellings of the Hindoo poor is incredible.

The bulk of the population, says Payne, the health officer at Calcutta, is worse than savages as regards the filthiness of their surroundings. The soil of the town is saturated with excrematitious matter. "If there is a little useless ground beside his house, the dweller can see no other use for it than to convert it into a latrine, and when the urine falls into a little hol-

low, he calls this a pond, and bathes in it."

The "Bustees," or native villages (and as is well known the outskirts of Calcutta are nothing but an agglomeration of these) are constituted, says Shakespeare, of a number of huts thrown together pell-mell, among which are open wells always contaminated by the drainage from the soil. The herds are separated by reservoirs of viscous stagnant water, crowded with putrid vegetation and decomposing animal matter, the surface steaming under the tropical sun and poisoning the surrounding atmosphere. These are the reservoirs which furnish the inhabitants with water for all purposes, and which also receive the residues of domestic life. The intervals between the huts serve for privies. But to a Hindoo, human excrements are "impure," and a thing which he must never touch. Another "caste," the "Mehters," is the only one which can remove ordure. This "caste," however, is not numerous, and charges besides so much for its services, that the Hindoo prefers to live beside his decomposing excrement, and to die poisoned, rather than remove it himself. If the "Mehter" does carry away the filth, he throws it into the nearest field. If rain prevents the removal, it soaks into the wells, and thus the pious Hindoo, who would not touch the filth with a shovel, in the end drinks it. The tanks, which serve as reservoirs in other places, are subject to the same uses and contamination. The rôle of these profoundly soiled waters is absolutely clear as a carier of cholera. One fact reported is typical. The town of Salem is attacked by cholera every time it appears in Southern India. The town is traversed by a stream, which, in the dry season, is nothing but a marshy tract. This water course is sacred for the domestic uses of the Hindoo. Mussulmans and Europeans are not allowed to use it. In the epidemic of 1881 the Hindoo suffered severely, the Mahommedans much less, and the Europeans not at all. The Pariahs, or outcasts, not being allowed to approach the stream, presented not a single case.

Again, the small town of Guntur was celebrated for its cholera epidemics. After an energetic cleansing and strict supervision of the water supply, with the result that cholera has disappeared. This is sufficient to show that perfect sanitation is an absolute necessity for the prevention of cholera.

We cannot reasonably expect to stop the march of the epidemic from India overland. The frontier to be watched is too great, and the loopholes for the entrance of disease too many. But on account of the slowness of the means of overland communication the danger from sea is much more to be feared, as the caravans are no longer used as convoys for the purposes of commerce.

A chief means of the spread of cholera from India is provided by the pilgrim ships which go from India to Hadjiz. The passengers may be attacked with cholera on the voyage, or some of their belongings may have been contaminated with the germs from cholera dejections, which being excluded from air and light may lie dormant until the disembarkation of the owners and the disturbance of their baggage. Even a person in apparent health may carry in himself the incubating cholera germ, and after some days (three to eight) be attacked with the disease and prove a focus for its dissemination. The deduction from this is, that the caravans and the pilgrim ships should be subjected to rigid examination; both in their departure and arrival their effects should be thoroughly disinfected by superheated steam. If cholera reaches Hadjiz, in order to penetrate into Europe it must cross the Red Sea and come through the Suez canal, and here is where it ought to be attacked and exterminated. Here the ships should go into quarantine and the passengers and their belonging be disinfected. As to prophylactic measures they consist in sanitation, disinfection, isolation, use of pure water, and other well known means of prevention, which, however, are generally very difficult to obtain.—*La Médicine Moderne.*

[Would it not be a proper subject for an international Commission of Hygiene to undertake, with a view of prohibiting the pilgrimages? Of course fanaticism would have to be overcome, but as a grand result the safety of western countries would be insured.—B.]

Carbonic Acid Poisoning (Quinquaid).—The first phenomena result from its action on the nervous system, following the law that the most predisposed part is the first to be attacked. If the poisoning follows all its stages, conscious-

ness is lost first, then brain power, then general sensibility, and finally motor phenomena, muscular and nervous.

At first, the subject experiences a sense of heaviness of the head, with pain, and ringing in the ears, temporal compression, vertigo, tendency to sleep, which are more noticeable as the poisoning is more intense. Soon the heart-beats become irregular and unequal, and are accompanied with epigastric pain. If walking is attempted, the patient reels like a drunken man, and may even fall. Intelligence remains clear. Now there comes a period of excitation. Respiration is embarrassed, anxiety increases, the pulse quickens and becomes weak; vomiting occurs. Then coma, and death comes on, sometimes in the midst of violent convulsions.

The first symptoms, aside from the gastralgia, are not painful; but it is quite otherwise with the later ones, which are confined to the period where the patient loses consciousness.

Some authors say that asphyxia by CO_2 is a mild method of suiciding. Others, on the contrary, affirm that this form of poisoning is excessively painful. The difference hinges on the stage of the poisoning.

In cases where the individual is, so to speak, overwhelmed by the poison, death comes rapidly. If the intoxication is less profound, the painful sensations are more accented. The poisoning may occur by such slow and inappreciable stages that it may be mistaken for disease of other character.

These different sensations have been clearly stated by a person who left, in writing, the impressions which he successively experienced, with the idea that they might be useful to science:

"I place on the table a lamp, a candle and a watch, and commence the ceremony. It is a quarter past 10. I have just lighted my stove; the charcoal burns slowly. At 10.20, pulse calm and of usual rate. 10.30: A thick smoke fills, gradually, the room; the candle appears almost extinguished. I begin to have a violent headache, my eyes are suffused, the pulse agitated, and a feeling of general malaise. 10.40: The candle out; the lamp still burning. My temples beat as though they would burst; desire for sleep; horrible suffering in the stomach; pulse, 80. 10 50: I stifle, have hallucinations, and get my breath with great difficulty. I can go no further. I feel symptoms of madness. 11: I can no longer write; my sight is obscured, my lamp extinguished. I did not think it possible to suffer so much before dying. 11.02:" (Here followed a few illegible characters, showing that coma and death had at last arrived.)

Electro therapeutic Notes.—Mosso, by the aid of excessively sensitive thermometers, has lately undertaken some very delicate researches on the temperature of the brain, which he demonstrates to be the warmest organ of the entire body. After curarizing dogs, he applies an electric current to the cerebral surface, and finds an immediate increase of one-half to one degree in temperature. The same occurs after section of the cord, with the same conditions. He has also studied the action of cocaine, chloroform, etc., and the influence of asphyxia on the brain and other organs. He finds, also, that, independently of the circulation, each organ has its own special tempera ture, and that the resultant of these is the average general temperature of the body.

Coloration of Preserves by Electricity.—M. Kochler gives details of a new application of electricity in the industrial arts, which need only be mentioned to be condemned. It is a desideratum among the manufacturers of this class of goods to give to vegetables the green color which characterizes them in the fresh condition. In order to color them strongly, some manufacturers have devised the plan of boiling them in a copper basin. A portion of the metal passes into solution under the influence of the electric current, and gives to the vegetables, etc., the poisonous green color so foolishly appreciated by the consumer.

Electricity in the Veterinary Art has been applied to the discovery of foreign bodies (metallic) in the horse's hoof. One pole is placed in contact with the interior of the hoof, the other with the shoe. If the horn has been pierced by a nail, the horse feels the irritation or shock of the current; if the contrary, the current cannot pass.

A New System for the Production of Electricity consists in the use of a small apparatus invented by Peignot.

The procedure is as follows: A quantity of mercury is driven by a pump through the pores of a chamois skin; the friction disengages a notable amount of electricity, which is easily collected. The amount is sufficient to give sparks.

—All from *L'Electrotherapie.*

News and Miscellany.

RUSH MEDICAL COLLEGE.—Dr. Charles Warrington Earle has been called to the chair of Obstetrics and Diseases of Children in Rush Medical College, recently made vacant by the death of the late Professor Knox. Dr. A. C. Cotton has been elected Clinical Professor of Diseases of Children.

The following letter from the editor of the *Toledo Medical Compend* sufficiently explains itself:

DEAR DOCTOR:—At the regular meeting of the Illinois State Board of Health, held in the city of Chicago, on the 27th ul., that body rendered a decision against the Toledo Medical College, of this city, and placed it upon the list of colleges not in good standing, for the purposes of the Illinois Medical Practice Act.

This is the result of the crooked work done by the school during the last session, in which half of the class was graduated illegally. Diplomas were given out so recklessly, and at such a variance with the published requirements and professional fidelity, as to render the institution little short of a diploma mill.

With characteristic vehemence the Illinois Board has come down upon this educational parasite by refusing to recognize the diplomas granted during the last session, as well as those issued hereafter.

The following extract from the published minutes of the above meeting will speak for itself:

"Upon a review of the testimony pro and con in the case of the Toledo Medical College, of Toledo, Ohio, it is ordered that any diploma of that institution, issued subsequently to the session of 1891, will not be received as a basis for the State Certificate entitling the holder to practice in the State of Illinois." And that "the presenting of such diploma must be supplemented by an examination before the Board of the graduate presenting the same, and that the Secretary is hereby entrusted to notify the Secretary of the College of this ruling."

The daily press of this city is deserving of great credit in exposing the fraudulent working of the college, among which we desire to especially mention the Toledo *Daily Blade.* On many occasions the press of Toledo published accounts of the vile work of the last year.

It is hoped that the medical press will be no less vigilant in their efforts to exterminate medical colleges of this class. A medical college should do honorable work or be compelled to cease its existence. We are, with best wishes,

Very cordially yours,
THE TOLEDO MEDICAL COMPEND,
H. G. BLAINE, M.D.

MEETING OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—The next meeting of the American Electro-Therapeutic Association will be held this fall in New York City, at the Academy of Medicine, on October 4, 5 and 6. As the success of electricity in medicine and surgery has now been well established and recognized just as well by the profession as by the public, the coming meeting may be looked upon as an event in the history of progress in electricity. The society consists of acknowledged specialists in electricity from all parts of North America, and includes the best known names in the profession. The President is Dr. William J. Morton, of New York; Secretary, Dr. Horatio R. Bigelow, 1716 Chestnut street, Philadelphia. The local Committee of Arrangements are Drs. Robert Newman and A. H. Goelet, of New York, who have their hands full by doing good work for the preparations. The literary part of the programme will consist of scientific papers, several prepared discussions, and the report of committees, who have experimented for the last year. These committees were appointed a year ago on special subjects, and their work has reference to establish uniformity in the manufacture and use of certain instruments used in the application of electricity. Everybody practising electricity has appreciated the good derived from the establishment of a standard in the measurements and units by the Electric Congress at Paris, and, therefore, anticipates more reform and benefit from the recommendations of said committees.

The titles of papers to be read have been announced already in such numbers, that the dilatory author coming in late will scarcely have an opportunity to be heard for pressure of limited time. In connection with the meeting, there will be an electric exhibition of batteries, instruments and appliances used in medical and surgical electricity. The exhibitors will be a representive body of manufacturers and publishers, who all have shown a willingness to be present, and have applied for space. There will be many novelties, inventions and new systems, all important to be inspected by the

profession. The committee has not forgotten the social element of the meeting, and has arranged many surprises and invitations for pleasure and instruction.

The members, who are strangers in New York, will be recommended to good hotels, and every attention shown them, in order to make their sojourn an agreeable and profitable one. It is hoped that the profession at large will take an interest in the deliberations in the American Electro-Therapeutic Association, and visit the sessions. All are welcome. The success of this meeting is well secured, and the progress of electricity in medicine never had a better chance.

WEEKLY Report of Interments in Philadelphia, from July 30 to August 6, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	1	1	Inflam'n bronchi	2	2
Aneurism of the aorta	1		" kidneys	9	
Alcoholism	5		" liver	3	
Apoplexy	19		" lungs	8	5
Asthma	2		" peritone'm	2	
Bright's disease	9	1	" s. & bowels	11	13
Burns and scalds	2	4	" heart	1	
Cancer	11		Insanity	3	
Casualties	9	1	Indigestion		1
Congestion of the brain	7	8	Jaundice	1	1
Congestion of the lungs	2		Locomotor ataxia	1	
Cholera infantum		103	Malformation		1
" morbus	7		Mania a-potu	2	
Cirrhosis of the liver	4		Marasmus		30
Consumption of the lungs	45	4	Measles		1
Convulsions		27	Neuralgia of the heart	1	
Croup		1	Obstruction of the bowels	1	1
Cyanosis		8	Old age	25	
Debility	9	12	Paralysis	11	
Diarrhœa	2	5	Purpura		1
Diphtheria		15	Rheumatism	3	
Disease of the heart	20	2	Suppression of urine		1
" " liver	1		Septicæmia	2	1
Disease of the kidneys	2		Softening of the brain	4	
Drowned	2	6	Stone in bladder	1	
Dropsy		2	Shock, surgical	1	1
Dysentery	7	1	Suffocation		1
Epilepsy		1	Suicide	3	
Erysipelas		1	Sunstroke	89	1
Extra uterine pregnancy	1		Syphilis	1	1
Fatty degeneration of the heart	3		Tabes mesenterica		1
Fever, puerperal	1		Teething		4
" remittent		1	Tumor	1	
" typhoid	11		Ulceration of the bowels	1	
Gangrene	1		Ulceration of the stomach	2	
Hydrophobia		1	Uræmia	3	
Inanition		23	Whooping-cough		8
Inflam'n brain	2	11	Total	378	315

OF THE FOREGOING THERE WERE:

Under 1 year	212	From 40 to 50	61
From 1 to 2	52	" 50 to 60	49
" 2 to 5	20	" 60 to 70	72
" 5 to 10	9	" 70 to 80	45
" 10 to 15	7	" 80 to 90	23
" 15 to 20	15	" 90 to 100	10
" 20 to 30	66		
" 30 to 40	52	Total	693

Males, 361; females, 332; boys, 158; girls, 157.

The number of deaths, compared with corresponding week of 1891 and of last week, was as follows:
Week ending August 8, 1891 was 479.
Week ending July 30, 1892, was 786.

By order of the Board of Health,
MOSES VEALE,
Health Officer.

Attest:
J. V. P. TURNER,
Chief Registration Clerk.

THE SURGEONS AT HOMESTEAD.—In the report of the punishment of Private Iams, at Homestead, as it appeared in the daily press, it seems that the Colonel ordered him triced up by the thumbs, and the surgeons to stand by and see that no harm befell him.

In executing this order the surgeons took turns at standing on a chair, and counting the pulse of the man, and when it reached 120 ordered him to be cut down.

It is not the province of this *Journal* to discuss the action of the Colonel in ordering the punishment which he did. Whether he exceeded his powers or not, is the duty and privilege of others to determine. But the action of the surgeons becomes a fit subject for discussion by the medical profession. It is generally admittted that medicine is the healing art, and that the great duty of the physician is to relieve pain, and not to inflict it, except it be for the purpose of saving life or cutting short other suffering.

Nowhere can it be claimed that it is ever within the scope of their professional duties to be a party to brutality. Military medical officers are appointed as professional men, for the purpose of exercising their profession, and in the exercise of that profession they are not subject to the orders of the line officers. What medical man would carry out a line of treatment in a given case because ordered to do so by his superior officer in the line? If the Colonel had ordered these medical men to cut off the leg of Private Iams, no doubt they would have refused, because it would have encroached upon their medical functions. By what process of reasoning these surgeons determined that the Colonel's orders had been complied with when the unfortunate man's pulse reached 120, it is hard to see. Why did they not order him down when his pulse reached 100? Or, when it began to rise above normal? Or, better yet, why did they not let the Colonel himself decide when the punishment was complete, and then step in to extend relief so far as they could?

Suppose they had blundered, and let the man hang so long as to end his life,

who would have been guilty of the murder, they or the Colonel? We care not what military law may be, it was the duty of these surgeons, as medical men, to refuse to carry out the orders of the Colonel, to tender their resignations on the spot if necessary, or even to suffer punishment for insubordination.

In their action, if it be correctly reported, the profession has been outraged. —*Journal Amer. Med. Association.*

THE present trouble at Homestead has been prolific in producing unpleasant and painful spectacles; but it seems to us that there has been nothing so barbarous as the punishment inflicted upon the soldier who dared to suggest the propriety of giving three cheers for the assassin of Mr. Frick. From a perusal of the account one would almost be led to the belief that the days of torture and thumb screws had not passed away.

While we can not sympathize with the sentiment of the man who desired to applaud attempted murder, much less can we sympathize with the brutality of tying a man up by the thumbs until he faints. Such barbarity should have no place in a civilized community, and the Colonel who ordered such punishment has disgraced his manhood and shown himself a bully and a tyrant. Further than this, we do not believe that legal justification for this act could be obtained from any right-minded judge.

The medical men figured in a very unenviable light in this affair, and the part they assumed is a degrading one for any member of our humane profession to undertake. We are sorry they allowed themselves to act as torturers to his majesty, the Colonel of the regiment, and believe that a second sober thought will convince them that they allowed themselves to be made parties to a despicable and cruel punishment. Doctors, we cry shame upon you!—*Lancet-Clinic.*

REPLY TO "ENLARGED PROSTATE A MYTH."—Mr. Editor, it may appear egotistic in me to further encroach on your space or patience, in reference to my own case; but, as I have already given your readers something of my experience up to January, 1891, I venture to obtrude still further though the subject may be hackneyed. In that article (January, 1891), I brought saw palmetto into notice, as having helped me more than anything else I had ever tried, and felt very hopeful of its lasting effect, and can now say, that its action on the gland has been effective in preventing further enlargement, but it failed to relieve, except temporarily, irritation of the neck of the bladder and prostatic portion of the urethra; so I had to use the catheter occasionally.

Some four months ago my attention was called to a new remedy called "sanmetto," composed of saw palmetto and santal. As a drowning man will "grasp at straws," so I grasped at a bottle of the remedy, and have been using it for about three months, with great relief, for I have no use for the catheter now, and the deposit of mucus, instead of being an inch or more thick in a quinine bottle of urine, as formerly, is now nearly nil, and no pain or irritation in urinating. I think the combination of saw palmetto and santal is a happy idea—the former acting on the gland and the latter on the mucous membrane of the bladder and urethra.

It may lose its effect, as other things have, but it commends itself to my judgment, as covering the pathological conditions better than any other remedy I have tried. For the benefit of those who have written me on the subject, I can say it is pleasant to take the dose, a teaspoonful about three times a day.—H. Knapp, M.D., Lathrop, Cal., in July *Medical World.*

ARMY, NAVY AND MARINE HOSPITAL SERVICE.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from July 25 to August 8, 1892.

Leave of absence for four months is granted Major Charles Smart, Surgeon, U. S. Army.

Leave of absence for fifteen days is granted Captain Edwin F. Gardner, Assistant-Surgeon, U. S. Army.

The leave of absence for seven days granted Major C. E. Munn, Surgeon, U. S. Army, and extended thirteen days, is hereby further extended three days.

Major Alfred A. Woodhull, Surgeon, granted leave of absence for two months, to take effect on or about August 1, 1892.

By direction of the President, Passed Assistant-Surgeon Henry B. Fitts, U. S. Navy, is assigned, temporarily, to the charge of the Army and Navy General Hospital, Hot Springs, Arkansas, to take effect during the absence therefrom of Surgeon Woodhull, the surgeon in charge.

Captain William O. Owen, Jr., Assistant Surgeon, U. S. Army, leave of absence extended fourteen days.

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PAGE

ORIGINAL ARTICLES:

THE TREATMENT OF OVARITIS AND OVARIAN NEURALGIA BY ELECTRICITY. By A. H. Goelet, M.D. - - - - - - - - - - - - - - - - - 213

WHY I USE ELECTRICITY IN GYNÆCOLOGY. By W. R. D. Blackwood, M.D. - - - - - - - - - 215

HOW SHALL WE CONDUCT A LABOR? By Hiram Corson, M.D. - - - - - - - - - - - - - - - 217

SHALL MOTHERS NURSE THEIR BABIES? By Dr. Mary A. Dixon Jones - - - - - - - - - - - 220

EDITORIAL:

THE PRESENT ATTITUDE OF THE MEDICAL PROFESSION IN REGARD TO THE SURGICAL MANAGEMENT OF SPINAL INJURIES - - - - - - - - 222

ANNOTATION:

Hypertrophic Rhinitis - - - - - - - - - - - - 222

LETTERS TO THE EDITOR:

Letter From Bedford Springs. *Waugh* - - - - - 222

The First Bath. *Wolfe* - - - - - - - - - - - 224

Maternal Impressions. *Sangree* - - - - - - - - 225

Dry-Cell Batteries Again. *Sangree* - - - - - - - 226

Case of Tape Worm. *Holland* - - - - - - - - - 226

Immediate Repair of Perineal Lacerations. *French* 227

THE MEDICAL DIGEST:

REVIEW OF RECENT GYNECOLOGICAL LITERATURE. *Dixon-Jones*—The Porro Operation *vs.* Cæsarian Section (*Price*)—Drainage with Gauze Packing in Recurrent Salpingitis and Peritonitis (*Polk*)—Dilatation and Curetting (*Noble*)—Resection of the Ovary (*Pozzi*)—Retroversion of the Uterus and Cystocele (*Boyd*)—Uterus Extirpation (*Hochenegg*)—Puerperal Peritonitis (*Myers*) - 227-229

Jin-e-col'-o gy (*Leonard's Ill. Med. Journal*)—Preservation of the Perineum (*Turner*)—Conservative Treatment of Salpingitis (*American Journal of Obstetrics*)—Treatment of Pyosalpinx by Aspiration and Irrigation (*Nitot*)—Vaginal Injections (*L'Union Médicale*)—The Influence of Parturient Lesions of the Uterus and Vagina in the Causation of Puerperal Insanity (*Rohé*)—The Licensing of Uneducated Midwives (*Rentoul*)—Cæsarian Section (*Foy*)—Specific Protective Inoculation and the Specific Cure of Infectious Diseases (*Wassermann*)—Buried Alive for Seventeen Days (*Lancet*)—Heroes and Martyrs (*Brit. Med. Jour.*) - 221, 230-238

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—Notes Extracted from the Report of the Commissmission on Cholera (*France*)—Formulary: Purgative for Children; Gastralgia (*Annales de Médicine*) - - - - - - - - - - - - - - - - - 239

MEDICAL NEWS AND MISCELLANY - - - - 239

ARMY, NAVY, AND MARINE HOSPITAL SERVICE - - - - - - - - - - - - - - - - - - 240

NOTES AND ITEMS - - - - - - - - - iv, viii

Original Articles.

THE TREATMENT OF OVARITIS AND OVARIAN NEURALGIA BY ELECTRICITY.[1]

BY A. H. GOELET, M.D.

UNDER this head are included those perplexing cases of what is known as ovarian neuralgia and chronic ovaritis, which is not really an inflammation but merely a state of hyperæmia or hyperplasia brought about in some instances by uterine and tubal disease, and in others by unusual exercise, too frequent coition, exposure to cold during menstruation, habitual constipation, etc.

The ovary is sometimes enlarged, exquisitely sensitive to touch, and may be prolapsed, producing a sensation of dragging in the pelvis with inability to stand erect or walk without serious discomfort. There is pain over one or both ovaries with dysparennia, hysteria, dysmenorrhœa, irregular menstruation, and pain with defecation, which is sometimes followed by a feeling of exhaustion. The symptoms are, however, by no means uniform, and are often perplexing. A peculiar feature about the dysmenorrhœa of ovaritis is that it is apt to precede or follow menstruation, and a feeling of depression or exhaustion may continue for several days or a week, and paroxysms of pain may occur in the interval between the menstrual periods. There may be marked evidence of an associated uterine or tubal disease, or it may be so slight as to pass unobserved. When the uterus is retro-displaced or the ovary is prolapsed, the condition is more readily determined.

This condition, which is generally considered most intractable and even incurable, yields readily to treatment by electricity administered in an intelligent manner. Relief of pain, which should be the first consideration, and forms the chief aim of treatment, is accomplished by

[1] Extracted from the recent work by Augustin H. Goelet, M.D., "The Electro-Therapeutics of Gynæcology."

the methodical application of vaginal bipolar faradization. This alone should constitute the treatment from the start, and, in order to be successful, the current should be derived from the secondary coil, so constructed as to the size and length of the wire that it will give a current of high tension and small volume.[1] (The ordinary faradic apparatus is in no way suitable for obtaining satisfactory results in these cases.) The vibrator should move with perfect regularity and smoothness, and the interruptions must reach the maximum attainable. Besides this, the current must be regulated (turned on and off) by means of a rheostat in the secondary circuit. The current must start at nothing, and must be increased so gradually as to be barely perceptible to the patient throughout the entire séance. The duration of the application must be from twenty to thirty minutes, or until a state of comfort and repose has been established, and it must be repeated every day until permanent freedom from pain is afforded. Then the interval may be extended to two days if permanent relief continues for that length of time. Galvanic applications should not be made under any circumstances, until perfect and prolonged sedation has been brought about by the faradic current.

The effect of the faradic current employed in this manner is sedation, which is produced by intense stimulation (gradually attained) whereby a condition of local anæsthesia and complete muscular relaxation is obtained. This will be maintained for a variable length of time at first (from six to twelve hours) and it is prolonged and rendered constant by frequent repetition. Coincident with relief of pain a subsidence of the hyperæmia occurs, which is directly attributable to the effect of the current upon the capillary circulation.

Attention must be paid to the location of the poles. The positive must be connected with the extremity of the electrode which comes more directly in contact with the sensitive ovary. In some instances vagino-abdominal applications with the positive pole in the vagina may be employed with advantage, but not nearly so intense a current can be employed by this method of administration.

[1] Minute details regarding the construction of satisfactory coils and the application of the current will be found in the first part of this work, in the chapter on the fardiac current.

This treatment may be supplemented by vagino abdominal galvanism (positive pole with carbon ball clay-covered electrode against the ovary in the vagina), as soon as a sufficient degree of sedation has been accomplished to allow its use without an aching sensation in the pelvis during or following its application. It is better always to follow every galvanic application by bi polar faradization of the vagina for ten or fifteen minutes. The strength of the galvanic applications should be moderate, never over twenty to thirty milliamperes, and the duration five or ten minutes.

The interior of the uterus should never be touched when it can possibly be avoided, though when a condition of endometritis is present, the cervical canal should be sufficiently patulous to allow free drainage of the secretions from the cavity of the uterus. To secure this, as soon as the condition will permit it, the dilating electrode of moderate size, connected with the negative pole and with only eight or ten milliamperes of current may be carefully introduced and immediately withdrawn. It will not be necessary to repeat this oftener than once in three or four days, and it must be abandoned if the slightest degree of irritation is provoked, until it can be comfortably endured. It will, of course, be understood that this statement does not apply when pent up secretions in the uterine cavity are a source of irritation, for then dilatation is demanded, and though attended with some degree of discomfort will afford relief, but if faradization is employed afterwards at the same sitting the pain provoked will be subdued, and it will aid in emptying the uterus by the contractions it excites.

This is probably one explanation of the success attending the use of this agent in salpingitis, *viz.*, the contractions excited causing the tubes to empty and drain into the uterine cavity. This is no doubt rendered possible in many instances, and is greatly aided by the influence exerted by the faradic in conjunction with the galvanic current in removing the tumefaction and hypertrophy of the lining membrane, as well as the surrounding infiltration, and thus relieving the obstruction in the tube.[1]

[1] According to Bland Sutton, the tube is never permanently occluded at the uterine end, though it may be at the distal extremity.

The static induced (secondary) current will exert the same sedative influence as the faradic current in these conditions, and may be used instead, if a static machine is at hand. The same electrodes as are used with the other current may be employed. The bipolar vaginal electrode, or an ordinary metallic ball, may be introduced into the vagina with a sponge-covered or clay-covered electrode upon the abdomen. The two wires running through the shaft of the bipolar electrode must be more carefully insulated for use with the static current than is ordinarily done for the faradic current, or no effect will be obtained. The connecting-cords are attached to the outside coating of the Leyden jars (the connecting-rod being removed) for obtaining the secondary induced current. The smallest size jars are ordinarily employed, though the next size will sometimes be required. The interruptions are produced by slowly separating the balls attached to the sliding-rods connected with each pole of the machine. In beginning the application, these balls must touch each other, and they are to be separated slowly until a distinct impulse is perceptible to the patient. This is not at all painful, but rather a pleasant sensation is experienced.

The balls are gradually separated as the impression becomes less perceptible, until a condition of local anæsthesia is established. The duration of the applications may be ten, fifteen, or twenty minutes; they may be repeated every day or every second day, as required, to afford constant relief.

These cases of chronic ovaritis and ovarian neuralgia, which are the dread of every gynæcologist, and which, heretofore, resisted every means adopted for their relief, and finally ended in laparotomy for excision of the offending organs, yield, in a most satisfactory manner, to the sedative plan of treatment outlined above. I have yet to see a single uncomplicated case of this kind that has not been promptly and permanently benefited by this agent, properly administered; and when the complication is amenable to treatment, the cure is only delayed until that can be overcome.

This plan of treatment has also afforded much satisfaction in relieving the harrassing pain which sometimes follows laparotomy for the removal of the appendages. In some very desperate cases of this kind, which have come under my observation, the relief has been prompt and permanent.

WHY I USE ELECTRICITY IN GYNÆCOLOGY.

By W. R. D. BLACKWOOD, M. D.,
PHILADELPHIA.

ELECTRO-THERAPEUTICS is slowly emerging from the chaos which has surrounded it since it began to be a feature in treatment of disease, and although its employment is largely (as yet), empirical, we are gradually getting it toward a firm basis, and, truly speaking, no other agent (opium alone excepted), in my opinion, is administered with any more certainty than is this most wonderful exhibition of force. When I say this, I mean that electricity is a certain curative in the hands of those who know how to handle it, and it is worse than useless in the hap hazard style of administration which characterizes the work of so many practitioners who may otherwise be experts, not alone in therapeutics, but in the management of disorders which are amenable to treatment by electricity, but which they utterly fail to relieve through this agent, owing to their ignorance of its power, and their blind adherance to ruts in practice, especially in surgery.

It is now nearly thirty years since I began to work with it in medicine, although I was familiar with its manifestations in other directions before that period, and when I began to write about it in the journals but few people had faith in it, and mighty few doctors took stock in it at all. To answer the conundrum heading this paper, I may say that I have always had faith in electricity because I knew it to be safe when carefully managed, and it never presents the unexpected which is more than we can say about the best-known and mildest drugs in ordinary use; many of our oldest and most reliable medicines have killed the patient in manifestly safe doses, why we do not know, even through the post-mortem. Of course electricity will kill anything living promptly and pleasantly when we wish it to do so, but it won't harm the most delicate person when properly used. Then again, I use this agent because it gives me results not to be had by any

drug, and because I can put the remedy just where I want it to go, and you cannot do this with medicines by the mouth, by the rectum, or by the skin. You don't have to soak every drop of blood in the sufferer to affect some circumscribed locality in the pelvis when electricity is employed, but you do when you give the interminable list of stuff which is guaranteed to cure every blessed ailment which affects women—I beg pardon, ladies,—so alluringly presented to the profession through our journals. Now some one will say, "look here! When I stick in a tampon, don't that act locally, and don't it act on the uterus and on nothing else? Eh! Or when I paint the cervix with that mixture which you have several times alluded to as being so good for the troubles of the cervix, doesn't that act locally alone?" No, my dear friend, it does not! It (and all other such applications) acts much more on the vagina than on the womb, and in the case of the iodine paint it will act on the outside of the vagina unless you are a little more careful than many doctors I know, and then you will hear from the woman next time she calls, with a vengeance. On the other hand, I can localize an electric application to the exact spot which I care to treat, and the current will not touch anything alongside, or beyond, or in front of it, unless I say so.

Besides this, we get diametrically opposite effects from electricity; for instance, stimulation, or sedation, as we wish. You can have either a flow of blood produced, or a hæmostatic action in the course of an operation, and this is an important matter in many ways; for instance, when curetting the uterus for engorgement in a strong woman, it is a good idea to let quite a quantity of blood escape as tending to reduce the bulk of the swollen organ; but, when the amount is satisfactory to you, it is not always easy to check it under the ordinary use of the common curette. With one such as I use, when the matter is at the point you desire, the positive current will at once stop any hemorrhage, however free. This obviates all stuffing of the vagina with styptic material, and lessens the tendency to septic trouble from retained drainage. After curetting the wound thus, I simply wash it out (or, possibly, only the vagina) with a sublimate solution, and the work is done. Cervical stenosis is quickly and permanently overcome by galvanic dilators.

Amputation of an elongated cervix is readily managed with the electric wire, and the trouble of getting at the bleeding points, if the flow be too great, is not difficult, for the wire itself, if reddened, will check the loss at once. I have been experimenting lately with Parson's method of treating cancer by strong currents, and the results, so far, are encouraging. (I refer, of course, to uterine cancer.) The procedure cannot do any harm, even if it does no good, and amputation, or total removal of the organ can be done subsequently to the electric treatment, if demanded.

I have had good results follow negative applications in a high quantity to the endometrium, where profuse leucorrhœa existed and which had not been benefited by the usual methods. I have also succeeded in reducing an undoubted pyosalpinx by the application of one pole to the uterine cornua internally, the other being closely applied externally by a small electrode to the tube near its ovarian end, and pressure made firmly. Laparotomists won't accept this, I know; but why should a large quantity of pus exude from the womb with flattening of the apparent swelling, and no recurrence prevail, if it was not pyosalpinx?

I find no agent more satisfactory to me in painful pelves in women than galvanism, and it does not much matter what the exact state is, if pain alone is present; it may be neuralgia of the contained organs, or it may result from congestion; anyhow, electricity is good in its effect. Nothing, in all my practice, has done so much for my dysmenorrhœic and amenorrhœic patients than electricity—not even the new and highly vaunted antipyretics and analgesic drugs—all of which I have fully tried and found wanting.

In a goodly number of fibroids I have succeeded in reducing the tumor to a size which practically may be considered a cure; the patient has been made comfortable as to pain; the bleeding has ceased; the dressmaker was not bothered about fitting lop-sided skirts; in short, the woman did not know that she had anything the matter with her.

I do not know of anything which has done more for my cases of vaginismus than galvanism, and, as this disorder is not an uncommon one, and is sometimes

hard to manage, the current should be more frequently employed than it is even by those who possess the requisite apparatus. So, also, in spasm and stricture of the urethra, nothing will relieve this sooner or more permanently than electricity. In that very disagreeable affair, urethral caruncle, I have known the growth to return after excision, after deep cauterization with acid, both carbolic and nitric; the galvano-cautery does the business for it every time. One point in this connection is, that the procedure is not at all painful, if the wire is quite hot, and it takes but a moment to do the work.

In deposits following inflammatory lesions, electricity is not surpassed by anything else as a method of attaining absorption. It is also very efficient in resolving pelvic hæmatoma and hæmatocele; much more so than anything else with which I am acquainted. This is something to be valued, for these conditions are not at all easily managed by drugs, and operative measures cannot always be either advocated or pronounced a certainty in the way of cure.

Having alluded to a few of the commoner disorders which my experience has encountered, I wind up this article by making a plea, and a strong one, for less laparotomy and more common sense in the management of that very trying condition, ectopic pregnancy. I have now operated on thirteen cases of undoubted extra-uterine pregnancy by electricity, and all were successful. I cannot here go into particulars, for I have several times in other papers given full accounts of these instances; suffice it to say that I am wedded to the use of faradism, to destroy the embryo, and then galvanism, to promote absorption. I do not admit, at all, that the embryo is necessarily a foreign body which demands removal by section; should this be true, then the laparotomy might as well be done at once. There has never been any trouble with this so-called "foreign body" in my hands; all have gone on to complete recovery. I use as strong a current as can be produced and borne for one hour; then I apply galvanism for from half an hour to one hour; after a week or so I begin the systematic use of the constant current, to hasten the disappearance of the tumor.

I have said little about the use of faradism in the subjects alluded to, and for this reason: the induced current of the coil is an alternating one, purely; its current direction is reversed, besides being interrupted, at each "make" and "break;" there is, therefore, no polarity whatever. I know that many writers on medical subjects think that there is some imaginary difference between the poles: that the negative is stronger than the positive, etc.; but this is incorrect. The so-called "extra-current" is the cause of the apparent difference, and so far as any therapeutic effect goes, there is not a whit of difference between either pole. If medical writers only knew something about commercial electricity, and had more insight into the use of "direct" and "alternating" currents, they would get over this form of nonsense. Faradism is well enough in certain aspects of neuralgia; but, so far as direction of continuous currents is concerned, it isn't "in it;" it is simply a stimulant. We cannot get the alterative effects from it as with galvanism, nor the cataphoric results either; so, also, with static electricity.

In the foregoing I have considered some points in which electricity is a good thing for women; a much better thing for them than the indiscriminate belly-ripping now so fashionable. It has now gotten to the point of asserting that one has a right to use the sound or speculum, do a laparotomy; (or what is better for the ripper, not the patient, send for an expert in this business) and then you can see what is wrong, even if you can't cure it by the section. Don't you think the woman has rights which we are bound to respect? I do. If I can't cure without cutting, I cut. It may be a little cut, or it may be a long abdominal section; I do whichever is really demanded. I can do either, but I do that which is best for my patient.

HOW SHALL WE CONDUCT A LABOR?

By HIRAM CORSON, M.D.

HAVING attended more than three thousand cases of labor in the way taught me by that gentle conscientious Professor of Midwifery, Dr. Thomas Chalkley James, of the University of Pennsylvania—a way that has since been taught by all professors and teachers of midwifery down to the present day—and as all of them with rare exceptions, prob-

ably one or two in a thousand, did well, I was recently surprised to learn from a paper in one of our medical journals—but on which I cannot now lay my hands—that the mode of managing a labor, so long and successfully followed by thousands of physicians, is wholly wrong.

The author of the paper advises (so confident is he that he is right, for he has had one case) "first to ascertain that labor has begun, then, without further delay, to proceed to force open the mouth of the womb by inserting one finger, then another and another and finally the whole hand. When this has been done then deliver with the forceps. In his case all this was effected within half an hour's time, in a primipara." I can truthfully say that this is not old-fashioned midwifery, not the kind taught in the medical colleges of the United States. No! No! It is something new. It is gynecology, the science and the art, I suppose. His acts thus speak to us. "Don't wait upon nature—the tardy old dame; disregard the entreaties of the woman to be left alone; take no thought of danger to herself and her child; subject her to the annoyance, sickness and danger of the anæsthetic, the forcible, sudden dilation of the os uteri and the introduction of the forceps; drag the head through the vagina in its dry heated state before the peculiar secretion, which always accompanies normal labor, has taken place to lubricate the passage, so that the vagina and perineum shall not be lacerated." Such I gather would be his advice to one who feared danger from acting on his plan, inasmuch as the woman is not considered at all in the work. Let us not forget now that it is not what he desires us to do in a difficult or dangerous case only, but in all cases, and as soon as we are sure that labor has begun. Who of us does not know that at that time in many cases, in a majority, I might say, the os uteri will scarcely admit the point of the finger; is very rigid, and the head not yet engaged in the upper strait. We are to seize it up there at random, drag it down in whatever position it may be, and on and on to complete delivery. To those of us who have seen nature at work—seen how steadily, and with little suffering to the patient she goes on hour after hour, steadily pressing the square angular head into a cone-shape, that it may readily pass through the lower strait and the soft parts without laceration of the os uteri and the perineum, it seems incredible that it could be safer to mother and child to have the head pressed into the proper elongated shape *suddenly*, and dragged away, than by nature's slower, easier process. Even under the careful management adopted by the profession there are many unavoidable lacerations of the os uteri and of the perineum, and Dr. William Goodall, as high authority as can be found in our country, says that of all causes of rupture of the perineum, the use of forceps is the greatest. We can readily imagine how much more frequently it would occur under the new plan proposed.

What reason does he give for this fierce haste? Simply this. To save time to the physician. He regards all waiting to let the womb expel the child as a very silly thing for an enlightened physician to do; a business too trifling to occupy his valuable time. To the woman this is not a trifling affair. She has for nine months patiently borne the many distresses incident to gestation, and with mingled hope and fear has looked forward to this day of trial. She relies on her physician to do his best to bring herself and her offspring safely through the trying ordeal of child-birth. Shall a few hours of time to the physician weigh against success to them?

To the honor of the profession, I can say that during sixty years of practice I have mingled much with medical men, and they have all appeared to act under the feeling that when in attendance on a woman in the throes of maternity, the exercise of patience, gentleness, and unwearied watchfulness for the safety of mother and child, was due from us to them.

If called early much patience and long waiting are needed while the womb is going through the process needed to effect delivery, but how much more frequently are we scarcely delayed at all. How often I have been amazed to see how safely and efficiently, and with but little suffering to the woman, nature did her work.

Hitherto it has been our habit in normal labors to wait before using the forceps until the os uteri was dilated or dilatable, but now our author advises that nature be allowed no part in the work.

To the common sense and humanity of the profession I leave this matter.

There is another departure from the old practice, or rather from the practice prevailing at this time in our State, Pennsylvania, with all country practitioners, namely, the importance of injecting large quantities of water into the womb immediately after the expulsion of the placenta. This practice is said to be increasing. The advice given to us is to use a powerful syringe and thoroughly cleanse the inside of the womb from all minute clots and shreds of blood, so that the womb can contract more strongly to prevent hemorrhage and keep out germs. A writer of a few months since stated that after the expulsion of the placenta, the site that it had occupied is a vast, open surface like an external wound, in which germs can burrow and breed; therefore, some antiseptic fluid should be used to wash that surface, and, indeed, the whole interior of the womb. Another recent writer says when labor is complete the interior of the womb is in a pathological, not a physiological, state. To my mind it is in as natural and physiological state as is the stomach after it is naturally emptied of the contents, or the bladder after the urine has been voided. But, to return to our teacher, who wishes us to flood the uterus after delivery, allow me to say that, to me, after seeing more than three thousand cases convalesce without the least set-back, this new measure seems the veriest and most dangerous meddling. We have all heard of many lives having been lost by the use of medicated injections, and yet who has heard of any dangerous or fatal results from avoiding to wash out the womb in the millions of births which have occurred in our country? Some months ago I gave the testimony of many physicians, country ones, that in many hundreds, and some in more than a thousand childbirths, not a woman was lost.

In the *Journal of the American Medical Association*, of June 25, is a brief notice of the "Address on Obstetrics," by Dr. H. G. McCormick, in which Dr. McCormick, in treating of antiseptics in childbirth, says: "Destroy microbes, unload any in the body, close all lacerations at once, so as not to leave a nest for infection; remove placenta; at once use bichloride, 1 to 4,000, as the temperature falls, then good is accomplished; unload the bowels with a saline, so as to wash out infection, close the womb with ergot, give quinine as a tonic, 1 grain every two hours, not as antithermic." How strange all this seems to me, and must seem to other country practitioners, who in thousands of cases allowed the woman to rest; did not disturb her by giving medicine, save an opiate, if one was needed to relieve pain; did not even give a laxative, unless the bowels were not moved on the third day; allowed her as much cold water for drink as she craved, and gave her pretty freely of food, and what was the result? The great majority up in two weeks and quite well. Why then use the bichloride, the saline mixture, the ergot and quinine when the patient does not need them? Oh! to be busy, to show how much the doctor knows, and the great care he has for his patient.

In the discussion that followed Dr. McCormick's paper, "Dr. Wm. B. Ulrich," an old practitioner, "believed in cleanliness, and that in asepsis he objected to so much washing and drugging of the womb and vagina. He had attended thousands of cases and never lost a woman."

Such are the utterances of the correspondents as I find them in that reliable journal. Dr. Ulrich is one of our truthful, eminent physicians, and yet he is advised—directed, I should say—to abandon his practice, so successful in thousands of cases, and resort to measures which are always annoying, and have not seldom proved fatal to lying in women.

Chief among these measures is the injecting a solution of bichloride into the recently emptied womb. When housewives used it years ago to destroy bedbugs, they were fearful should it touch a sore on the hand that it would poison it. These people who teach the use of bichloride to flood the womb, and seem to have no fear of it, are afraid of the natural, harmless discharge which follows labor, if retained even a short time; they fear it may get into the Fallopian tubes and cause disease there. Oh, yes! they fancy that instead of the discharge pursuing its natural channel out of the vagina, it will turn back by some unknown power, such as causes water to run up hill, and force its way into the tubes far up on the sides of the uterus, while they see no danger of the poisonous chloride entering these when propelled from a powerful syringe.

If Dr. Ulrich's experience stood alone, it should be sufficient to hold us to his

plan—the mode of James and Hodge, Deuses and Penrose—but, as it is the experience of thousands of other eminent practitioners, we may well believe that while our patient seems to be well, we should avoid medication and let her rest with the loved offspring lying beside her. From what I have said, it appears that to wash out the womb in order to get the blood and microbes out of it is the important matter. I wonder what idea such a teacher has of the condition of the womb, then. He must believe that it is a large, empty, collapsed bag, big as before the child was born, and that he can, with a syringe, dash water against its fundus and sides and wash it out as he could an infected tin pan.

But, what is its real condition? On the instant of delivery his anxiety was to have the uterus to contract strongly; indeed, that is what it generally does without his interference, and there it lies, reduced to a small, hard ball, the size of a tin cup; the site of the placenta so squeezed together that scarcely the least part of it could be touched by any solution dashed up through the narrow slit, if any slit there be, between the closely pressed sides of the womb from the os to the fundus. It is a small, hard ball, and can any solution thrown by his syringe (and which runs out as fast as it went in) dilate this ball so that the solution can touch the whole surface of the womb as it was before labor? Every obstetrician knows that in labor when the womb contracts well, there is almost no lochial discharge.

Reprehensible as are the measures recommended by office obstetricians, they will finally prevail if taught by professors in our colleges, for the graduates will carry their teachings into every nook and corner of our vast country, while those now in practice and who regard nature as a factor in labor, and aid her only when needed, are rapidly passing away.

SHALL MOTHERS NURSE THEIR BABIES?

By DR. MARY A. DIXON-JONES,
BROOKLYN, N. Y.

AMID all the wealth of European galleries, there is one painting of surpassing beauty. On that great canvas, in a room separate and alone, is the picture of "The Mother and the Child." For more than three centuries this has stirred in the human heart the deepest emotions; and ever, the most beautiful sight the eye can rest upon is a young mother with her first little babe. Motherhood is woman's highest honor and the sum of her noblest aspirations. All else that woman may accomplish is but as garniture around this central hope, and that woman's heart is an arid desert that has never felt maternal love and maternal impulses.

When the little stranger first comes, the true woman longs to hold it in a caressing embrace; with unspeakable joy and tenderness she looks into its face, nestles it close unto her bosom, and is glad to give it its first nourishment. To her it is a continual happiness to gratify, daily and hourly, the wants of the little creature, that has awakened in her soul such a depth of affection. It is a constant delight to see its satisfied happiness, its look of contentment, its growing intelligence, and its increasing love. The little one's eyes look up to her supplicatingly and with a wealth of meaning, while the very tendrils of its heart are linking themselves more and more to the mother.

These are pleasures a mother cannot afford to forego. The communion between mother and child grows more intimate, the forged links grow stronger and stronger; the love and natural affection constantly increase, ever changing and unchangeable. Even when the little nursling has grown to man or womanhood the same sympathy exists; there is the same unutterable tenderness and love; and ever, a mother's greatest pride is the dear ones she nursed at her bosom, to whom she gave her life strength; whom, through nights and days of weary watching, she guarded from every danger, and, with thoughtful care, trained to honor and usefulness.

None of a mother's duties can be delegated to another; she it is who should be with the little ones, lead, guide and sympathize, teach and instruct them; this is her time to mould, impress and tune a soul to heavenly harmonies.

Not to nurse her baby is a loss to the mother, a loss to the child, mentally and physically; and to both, in the heart and soul affection, the loss is irreparable. Without this continual love-feast, this oasis filled with verdure green, the heart is parched and withered; the mother is

apart from the child; there is an indescribable separation; ties are sundered that are never again knit together.

We must also bear in mind that the mother's milk is the best food for the child, the food which nature has prepared. No chemist's art, no laboratory, can so mix together the life ingredients, or make food so exactly suited to the delicate stomach of the little babe, or so perfectly adapted to meet its young wants.

It is a mother's duty to give this nourishment to her babe; no call or claim or demand is so obligatory. This holds her first, and by every consideration, every thought, and every desire for the child's welfare and well-being.

A married woman who has no children is to be commiserated; and having one, and not being able to nurse it, is again to be pitied and condoled; it shows a defect either in the high moral tone of the woman, or in her physical organization, or in her condition of health. To the child it is an injustice, a deprivation and a loss. How many little ones are stranded in early life for want of the food which nature has provided.

Yesterday, I had a touching illustration of this. A timid young married woman was the patient. Last September, a little one was born to her. Her husband was sick, not able to work, and upon her devolved the necessity of earning the support; so the poor woman had to tear herself from a mother's delightful duties and go out for a hard struggle. Her own little cherub she put in the Brooklyn Nursery, while she herself became wet-nurse to a baby who was already feeble and dying for want of the nourishment which its own mother could not give. Said this poor, sick woman: "My baby was perfectly well and healthy when I carried it to the nursery; it grew more and more feeble, more wasted, and in three weeks it was laid away in its little coffin." The sick baby she nursed grew stronger and stronger, gained new life, till it was a great joyous, bouncing boy. It had proper nourishment, and the food that was suitable to sustain and to give it the needed strength and vigor; consequently, it did well.

Yes; mothers should nurse their babies.

In obeying Nature's teaching, we secure our highest good and best happiness.

But I cannot neglect to say that the milk of some mothers, who are enfeebled and sick, is not as good for the child as many of the excellently-prepared infant foods.

JIN-E-COL'-O-JY.—The consonants in Latin, according to the English method, are usually pronounced like the corresponding English letters in the same situation; *e. g.*, c has the sound of s, and g the sound of j, before e, i, and y, and the diphthongs æ and œ. Since it is reasonably certain that c and g were always hard in the language of the ancient Romans and Greeks, some authors contend that we should assign to these letters in words of Greek or Latin origin the same hard sounds found in the original language. The premises are incorrect and inconsistent with general usage. We say geometry, genesis, and not geometry, genesis, and yet the latter is no more unreasonable than to say gy'necology. The orthography of the latter word in Latin is G-y-n-e-c-o-l-o-g-i-a, and is pronounced according to the Roman method, gynecolo'-gia, and in conformity with the English method gyn''ecolo'gia. We have, however, in the word gynecology the English analogue, conforming to English orthography, and is pronounced gyn-ecol'-ogy, like gynarchy and gyneocracy of similar analogy and etymology.

[For twelve years we have taught our classes not to be *guyed* into calling it *guy*-necology, as it was neither English, Greek nor Latin to so call it. The first rule of Latin grammar is that *g* before *e*, *i*, *y*, *æ* or *œ* should be *soft* in pronunciation; English follows this law. To call it *guy*-necology is to mix up Greek and Latin orthœpy; the hard *g* sound is Greek; the *y* sound is Latin; but remember the Greek *g* or gamma comes as a preceding letter to *u*, this *u* (*upsilon*) being changed to *y* when Latinized or Anglicized, hence the hard or Greek sound of *g* should then be lost, and the soft sound of *g* prevail. Any other pronunciation of *g* is barbarous under such conditions.—Editor].

—*Leonard's Ill. Med. Journal.*

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The Times and Register

A Weekly Journal of Medicine and Surgery.

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THE PRESENT ATTITUDE OF THE MEDICAL PROFESSION IN REGARD TO THE SURGICAL MANAGEMENT OF SPINAL INJURIES.

THIS question of the surgical treatment of those lesions of the medullary substance and the osseous structures of the spine, is one of enormous importance, and should be definitely settled by those whose practice, study and observation properly qualify them to speak.

Watson, at the Nashville meeting of the American Medical Association, presented an exhaustive and analytical monograph which has gone a great way to define the relation between physical, traumatic lesions and subsequent pathological changes, as revealed through an extensive series of injuries inflicted on etherized dogs.

Manley, of New York, followed him with a series of thirty cases of serious spinal lesions of every degree of severity, reported and described before the New York Medical Association; besides, in another full and systematical monograph the following year at the Washington meeting of the American Medical Association. The latter fully and unequivocally endorses the conclusion of Watson from his observations on the living subject, and concludes that Erichsen's "railway spine" is a purely mythical entity.

Let the contesting brethren test their mettle in this controversional warfare; but what we want is the "search-light thrown on." The simple question is: In serious spinal injuries, which cause paralysis and lead to the suspicion of fracture or displacement, do modern surgical methods permit us to safely make an exploratory incision? In other words, make a simple, a compound fracture; remove the fragments if there are any, or expose the cord?

The profession is ominously silent on this question. In this immense country there must be many broken backs in the course of the year. But, we hear nothing from them except now and again when an odd one has been successfully treated by surgical intervention. What becomes of the rest?

Are the failures relegated to quiet oblivion, or are operators reluctant to increase their mortuary records?

Annotation.

DR. W. J. NOLAN, of Emmetsburg, Iowa, has treated a case of hypertrophic rhinitis by the local application of glycerine on pledgets of cotton. Great relief ensued, and that in a very short time.

Letters to the Editor.

LETTER FROM BEDFORD SPRINGS

WE would be sorry indeed to have our valued contemporaries of the *Occidental Medical Times*, the *Lancet-Clinic*, and the *Medical Record* suppose we had any resentment against them for crediting the "Reflex Club" to other journals. It is simply impossible for any one to read all the medical journals published, and the mistake was one that

could not be guarded against. But it certainly seemed funny that three of the most wide-awake journalists in the country should be the only ones who did it. To us the appropriation of ideas that come back to us after many days, credited to other and probably better men, has long ceased to excite any other emotion than that of amusement. The suggestion of giving drugs in hot water has been translated into every language in which a medical journal is printed, and as yet we have never noted a credit to us. The action of pilocarpus in inducing mental aberration has come back to us from Siberia, though in this case credit was correctly given. The unkindest cut of all, however, is when we go off on a vacation, and the gentlemen who fill our place (so efficiently as to make the readers wish we would make the vacation permanent) pick out our items and republish them in our own journal, but credited to the *Arizoner Howler*, or some other kleptomaniac. Then we do get mad; and for the space of at least five minutes determine that never again will we furnish an idea to an ungrateful world. One item has thus been published in our own columns no less than four times! But such trifles are but ripples on the sea, and we have some suggestions that must have utterance.

DYSPNŒA.

Some time ago we published a paper by Dr. Alexander Harkin, a distinguished physician of Ireland, recommending counter-irritation over the pneumogastric nerve for cholera infantum. Several physicians who have employed the method have reported favorably upon it. In a case of dyspnœa, from laryngitis, in an adult, it occurred to me that the same principle should be applicable; and I applied one of Wyeth's cones of crystallized liniment briskly along the course of the pneumogastric in the neck. (N. B.—After making this application, take yourself off beyond the reach of a messenger for the space of an hour.) The result was admirable; relief ensuing at once, when the rubefacient effect was manifest. A few nights later a boy was seized with an asthmatic paroxysm in the night. The same application was made, and relief was so instantaneous that doctor and patient were alike surprised and pleased. These cones are composed of menthol and capsicum. The rubefacient action is speedily produced, the burning very decided, and in a few minutes it passes off, leaving the skin uninjured. The application may, therefore, be repeated at will; and in this it is superior to the blister, which requires longer time for action, and leaves the patient tender and disfigured for days, during which the application cannot be renewed. This form of counter-irritation is also of great value for nausea, vomiting and many forms of stomach and bowel affections, besides the choleraic. Any case of dyspnœa, not dependent on mechanical causes, should be relieved by it. The application should in all cases be made from behind the ear to the clavicle, along the anterior margin of the sterno cleido-mastoid muscle.

EUROPHEN.

This agent has now been employed by me for several months as a substitute for iodoform. As a reliever of pain, it is little, if any, inferior to the latter. In the treatment of small ulcers, wounds and burns, europhen has proved of equal value; but, to extensive surfaces it should only be applied when largely diluted, as it parts with its iodine quite easily, and systemic effects will be manifested. This occurred in one case of herpes zoster, in which I applied a strong ointment. An erythema appeared the next day with the coryza of iodism. I must add that the pain of the zoster was at once and permanently relieved; but the patient took phosphide of zinc at the same time, and the credit may be due to the latter agent. In soft chancre, europhen cannot cope with iodoform; but in true chancre and all syphilitic ulcers, europhen is superior either to iodoform or aristol, and probably to mercurial applications.

RANDOLPH'S ESCHAROTIC.

None of our usually alert manufacturing chemists appear to have recognized the value of this substance and placed it on the market. It is made by mixing a cocaine salt with strong nitric acid to the consistency of cream. The result is a painless escharotic. I have found it an excellent thing to apply to chancroids, first rendering the surrounding parts aseptic. Sometimes, after vaccinating with bovine virus, a hard nodule appears instead of the vesicle. One of these cases furnished material for bacterial culture,

the results of which may soon be made known. The nodules promptly disappear under the use of this painless caustic.

CATARRH.

In this elevated region, visitors from the tidewater districts suffer from acute catarrhs, especially if they dress in cottons and sit out in the evenings, when the dew is falling. For these catarrhs, coryzas, pharyngitis, laryngitis, etc., one of Mulford's triturates has proved very efficacious. It is composed of camphor, belladonna and quinine, and is called the "rhinitis" tablet. Three of these given at intervals of two hours will break up the catarrhal attack.

BEDFORD FOR SPORTSMEN.

How is it that our sportsmen are ignorant of this region? It swarms with game, and the brooks are alive with game fish; but it seems a terra incognita to the class which most needs it. Your typical sportsman has a healthy appetite, good digestion and full capacity for blood-making. He likes meats, good dinners and wine. If his occupation is sedentary, the inevitable results are plethora, corpulence, gout, or uricemia, with dullness, headaches, itchings, etc., etc. Now, this man needs the hardest kind of bodily labor; and if he were a cow-boy, he would never know what ill-health means. But it is not given to every one to whack bulls, and we must find some hard work that will still be attractive. For these cases to come to Bedford and drink its waters, while scouring the country for game, or following the hounds, is as near paradise as man is entitled to get in this world. At present, no game is in season except woodcock, and bunches of them are daily seen about the hotel porches. Strings of trout are proudly exhibited, and black bass are plentiful, and pike come from the slack-water above the town. The Springs Hotel has been crowded to its utmost capacity; and in every department is felt the necessity of enlargement, to accommodate the increasing patronage. More rooms for guests, for servants and for horses; enlarged and modernized bathing facilities are demanded. As the hotel is to remain open throughout the winter as a sanatorium, the therapeutic utility of the Bedford waters may be expected to become better known. At present, many come here for pleasure, and drink the waters simply because they are here, without much regard to their own needs or the properties of the waters. One instance may serve to illustrate the importance of taking advice: A lady affected with gastric catarrh and constipation was taking seven glasses a day of Bedford water, divided through the whole day. Result: debility, indigestion, insomnia and nervousness, with anorexia. She was going away, thoroughly disgusted with Bedford Springs, when she consulted me. I persuaded her to stay another week; ordered her two glasses of the magnesian water, to be taken before breakfast, as follows: One glass, cold, to be slowly sipped, occupying ten minutes; then, fifteen minutes' walk; then, another glass, also sipped cold, and ten minutes' more walking. Then, if the bowels did not act, an enema of one pint mineral water with a teaspoonful of salt. In the afternoon, a mineral water and sulphur bath, followed by a nap; pepsin, pancreatin and ox-gall tablet after each meal; good diet, avoiding pork, veal, fats, fries, liver, duck and ices. In two days the improvement was so marked that all thought of going away was dismissed.

At some future time I will write concerning the action of this water on gall stones.

W. F. WAUGH.

ON page 137 of your issue of July 30, you clip from the *Medical News* an extract of Dr. T. S. Parsons' paper, read before the Section on Diseases of Children at the Detroit meeting of the American Medical Association, in which the usual method of washing the infant at birth is charged with causative relations to some of the diseases which children suffer. In this relation, I wish to call attention to an article which I published more than twelve years ago. It reads thus:

THE FIRST BATH.—It is now generally the custom, and from time immemorial I suppose it has been, to wash or bathe infants immediately after birth. Some accoucheurs have, however, dispensed with this practice, and I think the arguments in favor of so doing are worthy of notice. We all know that sudden changes are to be dreaded on account of danger from shock; and in applying this knowledge to the infant, we may lessen the relative greatness of the change from its warm intra-uterine home to the cold external world, by removing no more of the smegma with which it is protected, than we can do by first smearing

the surface with lard or some bland vegetable oil, and then rubbing with clean, soft, white flannel.

Though taught in my medical course, and by the books I have read, to have this first bath given the infant, I have, during the last few years, followed the practice detailed above, and find that babies less often have a cold at my first after visit, than formerly.

The practitioner will find it quite easy to do this service himself while waiting for the cord to cease pulsation (which he should always do before ligating), unless the condition of the woman should demand his immediate attention. While thus engaged, he can also make the necessary inspection of the child, and can then pass it over to the nurse, ready to be dressed. Your busy practitioner will argue, to attend to all this, which the nurse could as well do, is infringing on his time. I may, however, add, that when the bed has been properly prepared and protected (*Vid. p. 361, Trans. Penna. State Med. Soc.*) it is seldom more than half an hour from the moment of the child's birth, when I am leaving the house, with the woman comfortably lying in a clean bed, supplied with medicine for the relief of severe after-pain, and the baby generally sleeping, lying on its right side in the bed beside its mother. Before the expiration of this half hour, I would certainly not feel justified in leaving, under the best circumstances.

Skippack, April 8, 1880.

I wish to add that I have up to the present time followed the plan above advocated, and with entirely satisfactory results. Yours very truly,

SAMUEL WOLFE, M.D.

1624 DIAMOND STREET, PHILA.

MATERNAL IMPRESSIONS.

A RECENT article in the *Medical Brief* by a Californian physician is devoted to the subject of Maternal Influences on the Fetus in Utero, and instances, among others, the following singular cases:

George D., of Jefferson, Ills., aged forty-four years, has talipes valgus marked in one foot, while the other has only rudiments of toes. Says that his mother stepped in cow manure, and scraped the toes of one foot in the grass and brushed the other from side to side.

C. T., a man about forty years, has a scared, wild look. Says his mother told him a drunken man scared her.

A. B., a boy of sixteen years, has a great desire for pork; never seems to be satisfied. His mother in a new country longed for pork, but it could not be had.

Two brothers; one, a student, was born while his mother was teaching her step-children; the other, the first child born after she had ceased teaching, will not study: books being distasteful to him. One of the step-children is a natural botanist, his mother having studied botany while *enciente*.

Mrs. Cotton, living near Bevay, Minn., was talking one afternoon with some lady friends when a pet flying squirrel flew down and struck her thigh. At confinement a perfect form, head, wings, body, and tail appeared upon the thigh of the child.

These examples of remarkable influences transmitted to the fetus should be sufficient to convince every one of those facetious and frivolous men who have hitherto been loathe to believe in the likelihood of maternal impressions; but lest there should still be left some doubting Thomas to be disposed of, I shall take the liberty of appending a few cases which have come under my own observation, and which are, if possible, even still more astonishing and remarkable than those credible examples recorded by the California doctor.

Mrs. A. N., while pregnant, shot a hare, and the child she was then carrying has since developed into a champion local sprinter.

The mother of T. E., when four months *enciente*, had great difficulty driving a stubborn hog out of the garden. Any one who has had such an experience knows that it will leave an unpleasant impression on the mind for some time. This lady was no exception to the rule. Her son, T. E., now grown to manhood, has always been noted for his swinish propensities, and with reference to his course of life generally, T. E.'s motto has evidently been "Whole hog or none at all."

Mrs. O. B. during her pregnancy picked up a young robin fluttering on the ground, and was much affected at its futile efforts to fly. The child, a girl, afterwards born, was sickly from birth, and died at the age of four years, being now, of course, an angel, with all the customary paraphernalia.

Henry T. is noted for his hang-dog air and sheepish look, and it is charged by many that he is in the habit of stealing the latter animals when opportunity offers. An explanation for this propensity is easily found in the fact that his mother, while *enciente*, devoted considerable time to a pet lamb.

Mrs. A. V. during her pregnancy was greatly startled by the braying of a donkey near her window. Her son became a well-known and forceful political stump-speaker, and has lately received the honor of being elected to the Legislature of his native State.

ERNEST B. SANGREE, M.D.
744 S. FIFTEENTH STREET, PHILA.

DRY CELL BATTERIES AGAIN.

DR. BLACKWOOD'S surmise in his communication of last week was right. The battery of which I complained was one made by the Baltimore chloride of silver firm. I am glad this subject is receiving some ventilation, for though every practitioner either has a battery or ought to have one, it is not every practitioner that is able to afford a room full of them, *a la* Dr. Blackwood, in order to pick from the lot that which is best Fortunately I do not stand alone on the dry cell subject. Immediately after the appearance of my article, Dr. Robert Newman, of New York, wrote me thus: "Let me congratulate the author of an article 'Dry Cell Batteries' in THE TIMES AND REGISTER. It is timely, true and to the point. Dry cells are a desideratum, but the present in use have only one good point: servant girls cannot ruin the carpets by upsetting the battery." As long as Dr. Newman's mantle o'er spreads me, I rest easily.

As for myself, I do not pretend to know much about electricity, but just as, although no cutler, I am confident that a knife whose edge turns at the first cut, is no good, so am I convinced that a battery which changes to mush while you are looking at it, is not the thing wanted, at least by the ordinary physician.

Dr. Blackwood believes my battery was short circuited, and suggests that, although I may not have been playing with it, others might have been. I assure Dr. Blackwood, as I assured the makers, that such was not the case, the battery was touched by no one but me. If short circuiting took place it was before the makers turned the battery over to me.

Of course the sponges may accidentally have been put together for an instant or two, but if such accidental momentary contact is sufficient to smash the cells to pieces, I should more than ever advise others against investing in such flimsy batteries.

Since my little experience came out in THE TIMES AND REGISTER, I have received a vituperating letter from one who, judging by the way he takes up the cudgel, must be a member of the Baltimore firm. He tells me, in addition to other information, that I have made myself ridiculous, and closes, after suggesting that I had better drop down to receive a few pointers of him, before again venturing into print. He also tells me that short circuiting will invariably shatter the little glass retaining cups, and offers me a handsome sum for any I can send him that will withstand a short circuit. This may be true, though it was news to me; but their breaking is, perhaps, not so remarkable from the fact that the glass is about as thin as that in a Prince Rupert drop. Maybe if the glass were thicker the mild current engendered would not so easily fracture the cups.

He told me, too, that the Edison Company had fifty of their batteries in use, and that much money had been spent in making their dry cells approximate perfection with regard to these two points; the Jerome Kidder Manufacturing Company write me that they also have spent much money in attempting to make a satisfactory dry-cell battery, but without avail; and that although such dry-cell batteries are good for electrical testing purposes (the use the Edison Company makes), they are of little good for anything else.

Since the batteries have now received mention both pro and con, I trust that others will think it worth while, for the good of the many, to give their thoughts or their experience on the subject.

ERNEST B. SANGREE, M.D.
744 S. FIFTEENTH STREET, PHILA.

CASE OF TAPE WORM.

I SEND you a case that has puzzled a number of physicians, and which I have brought through successfully.

A young lady, aged twenty-three years, sick for six years. Began with pain in the head, attending giddiness, and cutting abdominal pain. All the symptoms occurred at the same time. Sometimes constipation exists, again looseness, lumbar weakness. The cutting pains occur thrice daily, after which she is weak and nervous. Appetite irregular, at times

excessive; urine dark. Frequent vomiting after meals, ten or fifteen minutes; vertiginous sensations at times; headache not constant but violent; nights have been disturbed, and again too sleepy; tongue heavily coated. Diagnosis, tape worm.

I gave the following treatment with result as stated:

℞.—Hydrarg. chlor. mite..... grs. xv.
Sig. At night.

℞.—Ext. eth. felicis maris..... ℥ij.
Syr. aurantii..... ℥j.
Tinct. card. comp..... ℥ss.
Mist. acaciæ..... ℥ijss.
M.—S. Tablespoonful *ter in die* on an empty stomach.

She has passed pieces of tape worm one-half inch wide, the longest portion being fifteen feet. In all she has passed about fifty-five feet.

W. E. HOLLAND, M.D.

FAYETTEVILLE, FRANKLIN CO., PA.

IMMEDIATE REPAIR OF PERINEAL LACERATIONS.

I WISH to give you my method of managing lacerations of the perineum when the anal sphincter is not involved. After the woman is cleaned up, I turn her on her face, bring the lacerated parts together, and hold them with serre-fines. Then allow the bowel to remain confined for three days, when a soft movement should be procured, before removing the serre fines. I keep the woman a few days longer on her face, until I feel confident that the discharges will not affect it. This position favors a free exit to the lochial discharges, and also that from the bladder, and gives the patient very little discomfort if properly supported.

Thus far I have had no failure, and the woman gets up with a round pelvic floor, where under ordinary management they are more or less impaired. I report this because I have never known any one else who resorted to this position, and almost no one who tries to repair these lacerations, whether partial or complete, at the time of their occurrence, but permit the woman to recover with all the disability such impairment involves.

RUTH A. FRENCH, M.D.

PETATUMA, CAL.

The Medical Digest.

REVIEW OF RECENT GYNECOLOGICAL LITERATURE.

By DR. MARY A. DIXON-JONES,
BROOKLYN, N. Y.

DR. JOSEPH PRICE, of Philadelphia, has, in the June number of the *American Gynecological Journal*, a most interesting paper:

THE PORRO OPERATION *vs.* CÆSARIAN SECTION.

He says: It avoids many of the resultant dangers of Cæsarian section, not the least of these being the succulent uterus, with its incision. In the Porro operation the uterus is strangulated at once, thus precluding the danger of hemorrhage from uterine incision, and the intra-peritoneal treatment of the cut uterus, and also the great facility with which the operation may be performed are points in its favor. The advantages lie strongly in favor of the Porro from the further fact that there is a total absence of wounds in the peritoneal cavity, no involvement of important viscera; therefore less hemorrhage and less shock. In this operation there are other imminent dangers that the Porro avoids—adhesions with the intestines, which give rise to intestinal obstruction, adhesions between the uterus and abdominal incision and post-partum hemorrhage. There is always great uncertainty in the healing of the uterine incision.

Dr. Wm. M. Polk has lately written on

DRAINAGE WITH GAUZE PACKING IN RECURRENT SALPINGITIS AND PERITONITIS.

He says: Given a case of chronic inflammation of the tubes and ovaries, before recommending removal of the appendages resort to direct treatment of the interior of the uterus. Treatment should be applied, whether we know the tube to be open or not. My observation teaches me that the period immediately preceding menstruation is that in which the best results may be obtained. Apply the treatment, therefore, in the week immediately preceding the menstruation, permitting the "packing" to remain in place even up to the date of flow itself if thought best. Such packing of the inside of the uterus can remain in the interior of the organ throughout the menstrual period, without risk to the patient. It is doubt-

ful whether there is such a thing as a recovery where pus is formed in the ovary or in the peritoneal cavity.

To sum up the points which I desire to bring before you in this paper, I would say that I first wish to call attention to the advisability of extending our treatment of peri-uterine inflammation by scraping and packing the inside of the uterus; by selecting for this treatment the period immediately antecedent to menstruation. In case this does not give a sufficient degree of cure, making it necessary to go further, that we operate in such a way as to save the patient all or as much of the appendages as their condition will warrant, bearing in mind always that the essential object of our procedure is the maintenance, as far as possible, of the function of menstruation. —*New York Obstetrical Society.*

Dr. Chas. P. Noble in his paper on

DILATATION AND CURETTING

says: I wish to emphasize the fact that this treatment is advised only for cases of uncomplicated endometritis. In the treatment of cases of endometritis, complicated by salpingitis or pelvic peritonitis, this method of treatment is absolutely contra-indicated, because of its futility and because of its liability to induce acute salpingitis and peritonitis. In my judgment, the necessity for careful diagnosis in these cases cannot be too strongly insisted upon, in order that uncomplicated cases of endometritis may be separated from complicated. In one, dilatation is curative and safe; in the other, the procedure is futile and dangerous.

Dr. E. E. Montgomery: I do not believe that dilatation is necessarily contra-indicated, even when salpingitis exists, that is, where inflammation of the mucous membrane of the tubes is present.—*Obstetrical Society of Philadelphia*, meeting May 5, 1892.

Dr. Krug: The patient had pus tubes. Ordinarily he would immediately have performed laparotomy; he determined in this instance to attach the primary seat of the sepsis, so dilated the cervix, curetted and packed with gauze. Laparotomy was performed a week after the curettment.

Dr. Boldt could not see the advantage of dilating and curetting the uterus and running the risk, meanwhile of leaving pus sacs to rupture intra-peritonially. He thought it much better to open the abdomen, and afterwards do the curetting. At the present time he certainly would not advocate such a procedure.—*New York Obstetrical Society.*

Dr. Joseph Price: I enter this discussion purely to call a halt in all this tinkering. I do too many sections to save lives, and I find too much mischief to keep silent on a subject of this importance. In the presence of tubal or ovarian disease, if I recognized mischief above the uterus, I would not dilate, or drain, or make local applications. I have removed fifty-four uteri for malignant disease, and with many of these have been associated pus tubes and suppurating ovaries, but in not a single case have I found endometritis that I could not wipe away with a piece of cotton or gauze. I have removed eighty-two huge fibroids, another condition accountable for the endometritis so often found. In about every case I have incised the uterus with the specific purpose of studying this subject. It is exceptional that I find that condition of affairs so much preached about, and to cure which so much is done.—*Obstetrical Society of Philadelphia.*

RESECTION OF THE OVARY.

M. Pozzi stated in a paper published in *Le Semaine Medical*, August 1, 1891, p. 310, that "it oftens happened that the ovaries are only partially diseased; and he proposed that only the affected portions should be removed; that is to say, a resection of a portion of the ovary. He would advise resection of the ovary only when the Fallopian tubes are permeable. In a patient who has sclero cystic ovaries on both sides, bound down with adhesions, he removed the adhesions, found that the tubes were permeable, he then removed the whole of one ovary, and from the other the middle third. Next he adjusted the fimbriated extremity of the tube on the surface of the ovary, and fixed it with catgut sutures."

It is most gratifying that a portion of either ovary may be left with safety to the individual. But in my microscopical researches I have usually found when one portion of an ovary was diseased, other portions of the same ovary, and even the other ovary were about equally involved. Also from naked eye appearances we cannot tell the extent of the morbid changes that may exist in the

Fallopian tubes from salpingeal inflammation. When disease is so limited that it becomes advisable to leave portions of the organs, probably the patient is not suffering sufficiently to suggest the necessity of laparotomy.

J. St. Clair Boyd, M.D., M.Ch., reports, at the annual meeting N. I. Branch, British Medical Association, 1892, a case of

RETROVERSION OF THE UTERUS AND CYSTOCELE

operated on by stitching the uterus to the abdominal wall.

He says: After opening the abdomen by an incision 1½" long, with its lowest point ¾" above the pubes, my colleague, Dr. Williamson, passed a uterine sound, and with it made the uterus present at the wound. I then scraped its anterior surface for about ¾" square, and passed three silk-worm gut sutures through the recti muscles and anterior wall of uterus; these were tied, and the ends cut off short. I cannot see how this operation can fail to cure the procidentia.

Lawson Tait and Heywood Smith are the only British surgeons whom I have seen mentioned as having adopted this method of operation.

He also reports the successful suprapubic hysterectomies, and says: These operations were conducted on the same principles as I had been accustomed to see employed by Mr. Lawson Tait, who, I know, has performed it thirty-three times consecutively with successful results.

I may say that I consider Apostoli's electrical treatment would have been of no service in these cases. I have visited Apostoli's clinic in Paris. I got a list of the requisites for his treatment, and a letter of introduction from him to Gaiffe, who makes his electrical appliances. Having spent a large sum on apparatus, I must confess that the success of this treatment for fibroids of the uterus has not warranted my expenditure.

UTERUS EXTIRPATION.

Hochenegg exhibited a patient to the Gesellschaft in whom he had been successful in removing the uterus and rectum by a sacral operation. He considers this form of operating for removing the uterus more advantageous and safe than the ventral method; it admits of interfering and radically removing a cancerous uterus, bleeding is more easily controlled and drainage is complete, while the uterus can more easily be protected from immediate danger. This is not an entirely new operation in gynecology, as Hegar, Czerny and other surgeons performed it, but since that time has fallen into oblivion. As a proof of the safety of the operation he quotes the results of thirty-three operations, of which seventeen were performed by himself. In thirty-three operations only three deaths occurred, or 9 per cent.—*Medical Press.*

I do not believe this method will be generally received with favor.

PUERPERAL PERITONITIS.

Dr. A. Lapthorn Smith, of Montreal, reports a case in the *American Journal of Obstetrics*, of a partially retained placenta followed in forty-eight hours by puerperal peritonitis, ushered in by a chill, and temperature 104°. Knees drawn up; abdomen distended; face full and anxious; pulse 140 and thready; severe abdominal pain. Under palliative treatment, the pain was somewhat relieved for a time, but recurred worse than before.

On the fifth day he performed abdominal section, placed a koeberles serronocud around the uterus at the cervicocorporal junction, amputated the uterus, washed out the abdominal cavity with hot water, fastened the stump at the lower angle of the abdominal womb, packing powdered borax acid around it. No drainage tube was used.

The question is, If the uterus, at an earlier period, had been curetted and fully washed out with water that had been boiled, might not the dangers of the major operation have been avoided?

Thomas Nunnelly, of Leeds, England, says: "Out of thirty-eight cases of perecentisis for ovarian diseases, ten ended fatally. In the case of ovarian tumor, unilocular, that came under my own observation, tapping was resorted to; the patient died of peritonitis on the fourth day." Stelling says: "No surgeon should puncture an ovarian cyst." Stover says: "Never tap an ovarian cyst. It is a crime." Charles Clay, of Manchester, considers "It useless, dangerous, and to be followed only by evil."
—W. H. Myers, in *Journal of American Medical Association.*

We are thus frequently reminded of the dangers of tapping even unilocular ovarian cysts; but are not the dangers of draining a pus-tube through the vagina, much greater than tapping a unilocular ovarian cyst?

Dr. G. M. Edebohls before the American Medical Association, 1892, said many cases require more than one gynecological operation to effect a cure. All gynecological operations required in a given case should, at the present day, as a rule almost without exception, be performed at the same sitting. The patient has a right to expect this from the expert claiming to possess the highest degree of operative skill. To cite her an example, the author has a number of times, in case of complete procidentia utria, performed curettement, amputation of the cervix, anterior culporrhaphy, colpo perineorrhaphy and ventrofixation of the uterus at one sitting. *Medical Rem.*, June 18, 1892, p. 700.

Dr. A. P. Dudley in one case dilated, curetted and packed the uterus and then performed abdominal sections. In another opened the abdomen, spearing two diseased ovaries, breaking up adhesions, and affixing the uterus afterwards, and then putting the patient on the side, sewed up the recto-vaginal fistula and closed the perineum. *N. Y. Obst. Jour.*, June, '92, p. 824.

Dr. Francis Forester, a careful, thoughtful surgeon has in the same patient at one sitting, curetted the uterus, repaired the cervix and perineum, and then did laparotomy, etc.

No doubt the patients all did well, but I want especially to congratulate the operators that they are not women doctors.

In 1883, when I was physician to the Woman's Dispensary and Hospital, I, on one or two occasions, from a certain press of circumstances, performed on the same patient at one sitting, trachelorrlophy and perineorrhaphy. A physician, a nerve specialist, hearing of this, said: "Any surgeon who would perform two operations at the same time on the same patient ought to be cashiered from the hospital." This summary judgment may have come for a tendency, with a few persons, to persecute some of the women doctors. It is so easily done; and I certainly have had of it more than a Benjamin's portion, However, I endured the severe criticism. and was just as anxious, and have always earnestly tried to do the best for each and every patient, so in this, wishing to know the most excellent way, I wrote several eminent surgeons.

Professor B. F. Dawson, who was one of the consultants of the Woman's Dispensary and Hospital, and who had frequently advised me in consultation and assisted me in operations, and was at this time one of the surgeons of the New York State Woman's Hospital, wrote:

MY DEAR DOCTOR: In reply to your note of inquiry, I take pleasure in saying that I always perform the double operation unless some neurosis counter indicates it.

I remove perineal sutures on the eighth day, and leave cervix alone until the perineum is strong enough to bear gentle traction, say three or five months or more. If the wires are not left too long, and are well folded down they do no harm to vagina. Yours, B. F. DAWSON.

Prof. Dawson performed, June, 1883, the two operations at one sitting on the same patient; present, Drs. J. H. H. Burge, Frank Rockwell, John Byrne, and others.

Dr. T. A. Emmet, also surgeon in the New York State Woman's Hospital, wrote, March 11, 1884:

I never performed the two operations together when it could be avoided. When I do both operations at the same time, I leave the silver sutures in the cervix for a month before removing them, and this can be easily done as the patient will not or ought not to be out before that time. Yours truly, T. A. EMMET.

PRESERVATION OF THE PERINEUM.—In the discussion to-night it is not my intention to go into the details of causation of ruptures of the perineum, nor to enumerate the many plans of treatment advocated by various authors; but more to bring to the attention of this body a plan for the prevention of this accident, which I have of late adopted. On my part, it was the outcome of necessity. Appreciating that a clean cut heals more kindly and readily than a ragged tear, especially in a favorable position, I was induced in the emergency to carry an idea into practical application—a procedure I have had no reason to regret; for it certainly has, in more than one instance, served me well. We are fully aware of the all-importance of an intact perineum for the preservation and continuance of a healthy condition of the pelvic and genital organs of woman. Appreciating this fact as we do, it should be our duty to use every means available and practicable that tends to the welfare of our patients.

The majority of cases, especially multipara, with little attention, generally terminate favorably as far as the perineum is

concerned. Of course, it is our duty in every case of accouchment, no matter how simple, to give sufficient attention to this important part, if for nothing more than to have a clear conscience of duty well performed. Other cases, where the parts are more rigid and unyielding, will require more skill and attention. Sometimes, after hard and faithful work, our patient is delivered safely. Then, again, it may be our misfortune that she is torn to a degree ranging from a ruptured fourchette to the destruction of the entire perineal floor.

We have all been taught how the presenting part should be pressed back during a pain, especially when there is danger of rupture, so that the perineum shall have time to gradually stretch and dilate; that we should tend to shove the perineum forward—the perineum resting in the hollow of our hand, while the extended thumb rests upon one side of the vulva and fingers on the other—so that it shall be stretched over the presenting part, thereby helping it to dilate; also that it is preferable when the perineum is fully dilated to bring the presenting part forward between the pains and deliver them if possible. There are other plans that I might enumerate. It is well to remember that in vertex presentations it is not always the head, but often the after-coming shoulders, which give you trouble. We should guard the parts with care until after the shoulders are delivered.

It is when every method has been tried, and we feel that rupture is iminent, that I would suggest to take either a sharp pair of blunt-pointed scissors, or a blunt-pointed bistoury or hernia knife, and nick on both sides that part of the labia which is most severely stretched, midway between the pubis and the perineum, cutting outward from one-half to one inch. Before the cutting, the labia is stretched over the presenting part—a thin, web-like membrane, fitting it like a glove. It is not so readily lacerated as the perineum. After the incision it retracts. We have a larger and more commodious vulvar outlet; the child is born, the perineum saved, and no important parts have been injured. Instead of having a tendency to separate, as does a perineal tear at every movement of the patient, the severed edges come at once into apposition—seldom needing a stitch, readily healing, leaving the parts in a normal condition, the position of the wounds render them but little liable to septic absorption and infection.

I have treated four cases, all primiparæ, by the above method, with the very best possible result, and am confident had I pursued a different course, badly lacerated perinei, and the bugbear and trouble which attend them, would have been my lot. As it is, all four of my patients are enjoying perfect health as far as the perineum and the organs dependent upon it for support are concerned. I throw out this suggestion with the hope that it may help some of you in time of need, and render as faithful service as it has me.

—Turner, *Va. Med. Monthly.*

Conservative Treatment of Salpingitis.—The old belief of the great preponderance of cellulitis over peritonitis, in pelvic disease, having been extensively questioned, denied and disproved, writers and operators are running to the opposite extreme and denying altogether—except occasionally in the puerperal state—the occurrence of cellulitis. Dr. Joseph Price is an extremist in this direction, and in a recent article inveighs pointedly against opium, flaxseed maceration, iodine decoration and electric placebo; holding that about all pelvic inflammatory disease is peritonitis, induced by purulent accumulations in the Fallopian tubes, and that the only remedy is abdominal section and removal of the tubes. He has operated many hundreds of times, and, as with many others, has been constantly looking for cellulitis, and not finding it. In a paper with the title of this paragraph, Dr. Paul F. Mundé takes a more conservative view, and holds that, while in their chronic stages nearly all pelvic cases require laparotomy, many in the acute stages, if properly treated, may be cured without resort to abdominal incision. He holds that many uterine appendages have been removed which, with a little patience and perseverance on the part of the physician and patient, could have been saved. This is especially the case in catarrhal salpingitis, with pain in one or both ovarian regions, which does not yield at once to local applications of iodine, etc., and in which the appearance, perhaps at irregular intervals, of a muco-purulent discharge from the vagina, denotes the possible presence of a pyosalpinx. Persevering treatment will, in a large majority of such cases, relieve and eventually

cure. A positive diagnosis is not always possible, but is based on more or less constant ovarian pain, with occasional exacerbations and inflammation, and deterioration of health. Physical examination reveals the uterus more or less immovable, chiefly from side to side, the vaginal vault somewhat rigid, tense; and bimanually, the appendages are felt to be swollen, often very tender, and attached to the bottom of Douglas' pouch. Frequently no distinct disease of the appendages can be felt by the finger, or one feels an oblong, immovable swelling of the size of the little or index finger, through the vaginal vault or behind the cervix; or the swelling may be much larger, and present undoubted signs of fluctuation. Again, the swelling may be distinctly or indistinctly circular. In the former case it is probable the tube contains either pus, serum or blood; in the latter, the ovary. The writer says: "Now what I wish to emphasize, is the fact that a mere slight, more or less acute or sub-acute inflammatory enlargement of the Fallopian tube, even though it be entirely detectable by the finger *per vaginam*, does not warrant the removal of the diseased organ until all palliative means at our disposal have been tried and tried again without avail. The mere presence of catarrhal salpingitis, with or without adhesions, with or without agglutination of the tube, with or without closure of its fimbriated extremity; the mere presence of a certain amount of pain in these regions, does not by itself warrant us in removing the diseased organs." Pus in the Fallopian tube *always* warrants operation for its removal. If accessible *per vaginam*, then after aspiration to prove the diagnosis, it may be opened, drained, washed out and a drainage tube inserted; otherwise a laparotomy becomes necessary. Acute salpingitis is treated by rest in bed, hot vaginal douches, hot poultices, opium to allay pain, antipyretics to control fever. When subacute, mild applications of tincture of iodine and glycerine, equal parts, may be made to the vaginal vault accompanied by glycerine tampons. Daily sitz baths of a temperature of 105° F. for half an hour may be given. Blisters may be placed on the abdomen on the affected side. This treatment for from three to six weeks usually effects recovery; it may take longer. A tube as large as a banana will sometimes gradually diminish, shrivel and entirely disappear. These views are justified by reference to a large experience and many cases. In conclusion, Dr. Mundé refers to many preservative methods, when laparotomy becomes imperative, such as detaching adherent tubes without removal, when found healthy; detaching, pressing out the mucus contents and attaching the uterus to the abdominal wall, to prevent readhesion; removing the fimbriated extremity of the tube to restore its lumen; excising small cysts of the ovary and cauterizing, or uniting the walls of incision in the ovary with catgut sutures.—*American Journal of Obstetrics.*

TREATMENT OF PYOSALPINX BY ASPIRATION AND IRRIGATION.—Nitot (*Bull. et Mém. de la Soc. Obstet. et Gynécol. de Paris*, No. 7, 1892) calls attention to the fact that in many cases of pelvic suppuration it is not always possible to remove a diseased tube, so that the abscess must be packed and drained through the abdominal wound, with considerable danger to the patient. Vaginal hysterectomy performed for the same condition is generally regarded as too heroic an operation. Conservative surgeons recommend opening the abdomen and withdrawing the contents of a pyosalpinx without extirpating the tube. It seems more rational to do this by puncture *per vaginam*. The writer uses a large-sized needle, and washes out the tube with a solution of bichloride after withdrawing its contents. With strict antiseptic precautions there is a minimum amount of risk, and laparotomy can be performed subsequently if desired.—*Amer. Jour. Med. Sci.*

VAGINAL INJECTIONS.—*Antiseptic.*—*L'Union Médicale* states in its issue for February 29, 1892, that the following is used by Sunar for the purpose of rendering the vagina antiseptic:

℞.—Beta-naphthol..... ..... ʒiv.
Alcohol..... ʒxxx.

M.—Sig. Make into solution and add a teaspoonful to a quart of water which has previously been boiled and filtered. This mixture is then given as a vaginal injection, cold or hot, as the case may require it.

THE INFLUENCE OF PARTURIENT LESIONS OF THE UTERUS AND VAGINA IN THE CAUSATION OF PUERPERAL INSANITY.—Four cases were reported, in each of whom there was rupture of the perineum, laceration of the cervix, and morbid

conditions of the ovaries and tubes. In all laparotomy was performed and the uterine appendages removed. Two of the cases, one of ten weeks and the other of eighteen months' duration, recovered their normal mental condition after the operation. The other two cases, both of five years' duration, and in a condition of partial dementia, were very much improved.

These cases are held to justify the following conclusions:

1. Puerperal insanity is, in at least the majority of cases, an infection psychosis.

2. Without rejecting the influence of other factors, such as heredity, anæmia, exhaustion, mental shock and distress, careful observation will show that few cases of puerperal insanity occur without preceding, or coincident, puerperal infection.

The reasons for this opinion may be briefly summed up as follows:

1. Puerperal insanity occurs in the great majority of cases, within the first ten days after delivery—about one-half in the first five days—the same period during which puerperal infection usually occurs.

2. It is usually accompanied by elevation of temperature and other evidences of febrile disturbance.

3. The clinical form in which puerperal insanity manifests itself is, in the majority of cases, that of acute delirious or confusional mania. Depressive states are rare, except as secondary forms. In other words, the most frequent condition is one most closely resembling febrile delirium.

4. The death-rate is much higher than in simple mania. Death occurs from exhaustion, usually with high temperature and rapid pulse.

5. Post-mortem examinations, though apparently infrequent in these cases, have shown grave involvement of the pelvic viscera.

6. Examinations of the pelvic organs during life show lacerations of the perineum and cervix uteri (facile channels of infection in the peurperal woman). As secondary conditions are found intra-pelvic (peritoneal) inflammations, and consequent abnormal locations, fixations and congestions of the uterus, tubes and ovaries.

7. The results of operations seem to show that removal of local sources of irritation increases the chances of recovery from the mental disease.—Rohé, *Amer. Gyn. Jour.*

THE LICENSING OF UNEDUCATED MIDWIVES.—Those in this country who have long believed this to be an evil against which the profession is powerless to act, will be pleased to read the following vigorous letter upon "The Threatened Decadence of Obstetrical Medicine," by Dr. Robert R. Rentoul, of Liverpool, England, in the *Medical Press and Circular:*

The latest fad is that the practice of midwifery should revert to that low estate which it occupied when Fielding, Ould, Denman, Simpson, Barnes, and others stepped in and rescued it from quacks and midwives. Surgery has emancipated itself from the company of the barber and bone-setter, while medicine has shook herself free from the society of the drug-vender and herbalist. Other learned callings also have escaped from old and evil associations. Why, then, is it proposed that a new order of midwifery practitioners should be established? Would the proposal for the formation of an inferior order of the clergy, or of barristers or solicitors be tolerated? What would physicians or surgeons say if it were proposed to form an inferior order of physicians or surgeons, to grant a diploma to all unqualified practitioners, herbalists, bone-setters, and such like? Why, then, is it proposed that midwifery should take a retrograde step? And if this is necessary for midwifery, why not for medicine and surgery also?

Have the present medical practitioners failed in their duty to lying-in women? Has the obstetric art advanced or receded since it was incorporated a part of medical education? Have not the lives of many pregnant women been saved since then? Are not medical fees going down yearly, while, at the same time, the wages of the industrial classes have—according to Giffen—increased by fifty per cent.?

Has not the Medical Act of 1886 enacted that the medical student—be the student male or female—must be trained in medicine, surgery, and midwifery, must be examined in these three subjects, and must be guaranteed to be competent to practice medicine, surgery, and midwifery? Our legislators, therefore, have wisely enacted that medicine, surgery, and midwifery are a trinity, and that they must not be disassociated. If it were otherwise, the death-rate of lying-in women would be as high as it was before

midwifery was placed upon the same level as medicine. I am not one of those who seem to think that women should have as little attention given to them during their confinement as is given to the brute creation. Yet this seems to be the feeling which actuates some—this, and the desire of a small clique of women's rights agitators, and of those who make a few hundreds a year by selling diplomas to midwives.

However, this effort to establish a new order of obstetric practitioners must fail if the medical profession is in earnest in carrying out the traditions of our pred ecessors, and if the General Medical Council does its duty in seeing that the Medical Act of 1886 is not practically repealed. We must remember that the practice of midwifery has been taken from a very obscure place, and that it required very great efforts on the part of a few men to raise it to the position which it now occupies.

At first the nickname of "man-midwife" was given to medical practitioners who dared to practice midwifery, and thus tried to save the lives of women. The Royal Colleges also blackballed those who practised midwifery. Thus, the Royal College of Physicians of Ireland refused to examine Fielding Ould for the degree of Doctor of Physic of the University of Dublin because he practised midwifery, and on the ground that being a "man midwife," he should not be given a medical degree. (To understand this, it is to be remembered that the R. C. P. I., up till 1695, acted as the Medical Board of Examiners for the University of Dublin—the College agreeing to admit none but Doctors of Physic to its diploma.) But, in 1761, the Dublin University constituted its own examiners, and for one reason, because the R. C. P. I. had refused to examine Ould, the man-midwife, for the degree of Bachelor of Medicine upon the "ground that the practice of midwifery was derogatory to the dignity of the profession of medicine." The R. C. P. I., in 1753, although they examined and granted a diploma entitling the owner to practice midwifery, ordained that no one practising midwifery should be examined for their diploma to practice medicine.

Speaking on this subject, Sir Charles Cameron, in his interesting work, "History of the Royal College of Surgeons in Ireland," p. 59, writes: "It seems strange that so late as the fourth decade of the present century, eminent physicians should be so unenlightened as to regard midwifery practice as one which, to a certain extent, degraded a medical practitioner. When Sir H. Halford, President of the Royal College of Physicians, London, was examined in 1834 by the Select Committee of the House of Commons on medical education, he stated that it was not desirable to repeal that by-law which excluded from the Fellowship of the College persons engaged in the practice of midwifery."

As regards the Royal College of Physicians of Edinburgh, on May 17, 1765, "an Act was passed declaring that for the future no person should be admitted to be one of the Fellows whose common business is to practice midwifery . . . . and further, that if any member of the College shall, after his being received a Fellow, practice any of these lower acts, he shall be degraded . . . . and struck out of the roll." (See Historical Sketch and Laws of the R. C. P., Edin.) As regards the Royal College of Surgeons of England, their charter of 1843 enacted (10): "No Fellow shall be eligible as a member of the Council of the said college while practising midwifery . . . . . or who shall have practised midwifery . . . . at any time during the five years next preceding the day of election, and if any member of the Council, after this election, shall practice midwifery, he shall be liable to be removed from the Council."

As regards the universities, they were equally as backward in this matter. It must be remembered, that even to-day there are some who still resent the placing of midwifery on the same level as medicine, and who will do their utmost to repeal the Medical Act of 1886.

By this slow building up of midwifery, the lives of innumerable women have been saved. Yet, although Dr. M. Duncan has told us that one in every fifteen women in their first labor dies, and the statistics of the London lying-in charities fix it at one in twenty—although we know that many of our confinement cases are brought to a successful issue, not so much through the obstetric as by our medical knowledge, we have been pestered for the last two years by a number of faddists, diploma venders, and women's rights

agitators, who seem to be doing their best—all in good faith—to repeal the Medical Act, and generally to show to us that the elevating of midwifery to the same level of importance as medicine and surgery is a gross blunder, and that it must be given into the hands of midwives. Or, more plainly, a number of persons propose offering to the industrial classes an order of obstetric practitioners whom they themselves would on no account call in to attend their own wives; nor would any of those medical practitioners, who now favor the proposal, recommend any of their patients, or relatives or friends, to employ the class they propose supplying every other person with except themselves.

Cæsarian Section.—In the *Medical Press*, of August 27, 1890, I published a reprint of the extraordinary Cæsarian operation performed in January, 1738-9 on Alice O'Neal by the "handywoman," Mary Donally, at Charlemont, near Dungannon. To-day I would call attention to the hardly less interesting case of Sarah McKinna, of the same neighborhood, to wit, Bentram, two miles from the city of Clogher, in the County of Tyrone.

The Rev. Dean Copping forwarded the following account of the case to the Royal Society of London, and it is thus reported in the "Philosophical Transactions" for 1741, No. 401, p. 814.

Sarah McKinna was married at the age of sixteen years. Before her marriage she never had the appearance peculiar to women, but in a month after her marriage those appearances showed themselves properly. Ten months after her marriage she found the symptoms of pregnancy, and bore a child at the expiration of the usual time. Ten months after she was delivered of another; and each time had a speedy and easy delivery.

Two months after her second delivery, symptoms of pregnancy appeared again, and increased in proportion to the time; but at the end of nine months those symptoms began to abate, and in a little time she had no other reason for thinking she was with child but the absolute stoppage of catamenia. Nor had she, during the space of six years and some months, any one return of them; but for the greatest part of that time, especially the first four years, she was perpetually afflicted with most violent pains in the middle region of the abdomen.

Some time in the seventh year after her last pregnancy, which ended in such an unusual manner, a swelling in her belly, and other symptoms made her conclude she was again pregnant. About seven months after this uncertain account, a boil, as she thought, appeared about an inch and a half higher than her navel. During this time of her pregnancy she often found the symptoms of her being quick with child, till about six weeks before this boil, as she called it, appeared. It was attended with very great pain.

She sent for one, O'Neil, a butcher. This man came to her the Sunday after her message, and found her in an expiring condition. By this time the imposthumation had broken, and an elbow of the child had forced itself through it, and appeared in view. At the request of herself and friends, he undertook to administer relief to her, and made so large an incision above and below the navel as enabled him, by fixing his fingers under the jaw of the fœtus, to extract it; in which operation he met with not the least impediment. He afterwards looked into her belly, and seeing something black, he put in his hand, and extracted by pieces a perfect skeleton of a child, and several pieces of black putrified flesh. After the operation, he stitched her up, and in six weeks she pursued her business about the house.

She had been in good health ever after; only she had a navel rupture, owing to the ignorance of the man in not applying a proper bandage.

—Foy, *The Medical Press.*

Specific Protective Inoculation and the Specific Cure of Infectious Diseases.—This was the subject of a discourse delivered at the Society for Public Medicine by Dr. Wasserman, one of Prof. Koch's co-workers. He said:

The theme I am about to speak on to-day stands in the foreground of interest amongst the medical sciences; yea, I may even go further, and say in the foreground of general interest, since it was shown by the epochal discovery of tuberculin by Prof. Koch that we are in a position to artificially influence the most poisonous microbes, or, at least, their products, in the living organism. From that period the object has never disappeared from sight. The acute infective diseases have had, if the expression be

allowed me, the advantage of being the most popular diseases. They possess peculiarities that render them distinct from all others, and have always attracted the attention of the public.

Above all these is the typical and specific course of the affection. Let us take as an example the most frequent representative of this class, acute inflammation of the lungs, pneumonia. In its features it has not changed since the classical observations of Hippocrates, the oldest observer down to our own day. It began then, as now, in the uncomplicated cases with shivering, which hurls the individual, however healthy and blooming previously, upon the bed of sickness. Then follows the period of high fever along with the other well-known symptoms of the disease. Then, suddenly, comes a change in the picture. In the evening the relatives have left the previously sick man as he, with bounding pulse, difficult breathing, and high fever, tosses restlessly to and fro. In the morning we find the patient free from all these symptoms. The breathing is quiet, the temperature has returned to the normal, the thirst has subsided; in short, the whole subjective condition of the patient is so good that he feels as if recovered, and frequently so early gives expression to the wish to be going about his business. In other words, the crisis has passed.

You may well think that this exhibition of power of natura sanans has not passed unobserved. It has been felt for ages that something out of the common was present. Still more was this feeling called forth when it was observed that almost all these diseases did not occur sporadically, and without regularity, but rather in the form of general epidemics, yea, frequently in the form of pan-epidemics, in other words, that they were transmissible from one individual to another, there again to recommence the same course.

All this shows that in these diseases there is a perfectly distinct noxious agent; a poison enters the system from without, and hence all these evidences of its power; and, so long as scientific medicine has had an existence, have the best spirits and representatives of it wearied themselves in the attempts to throw light upon these mysterious excitors of disease. . . . . In the most recent times only has a light penetrated this dark region, and as a result of the epochal investigations of Pasteur, Koch, and their disciples, as these investigators showed that for the majority of the infective diseases a specific, perfectly distinct visible excitor of disease was present, belonging to the class of bacteria, and now only was it possible for the scientific study of the subject to begin, and now only could attempts be made to protect the individual against these specific diseases, and in further course to cure them. Before I turn to my proper subject, however, I may be permitted to touch upon the ætiological side, for it is self-evident that we must be clear about an opponent, and understand his method of fighting, before we can think of the weapons for a successful struggle with him. You know that we distinguish bacteria, according to their outward appearance, into three classes: the staff, the ball, and the spiral-shaped. This morphological distinction is not important for us, but it is important for us to know how this organism behaves in the animal body he invades, and here we distinguish two large and distinct classes. The one we distinguish as septicæmias, the other as toxic affections. I will attempt to explain the mode of action of the two classes by an example. If I inoculate the root of the tail of a mouse with a trace of anthrax culture, or a drop of blood from another animal that has died of anthrax, the mouse dies within from thirty-six to sixty hours, according to the virulence of the inoculation material. If I dissect the body, I find microscopically nothing in the organs except a relatively large swelling of the spleen, that serves to explain the sudden death. If I now bring a drop of blood out of the heart under the microscope, I see the whole field of vision filled with anthrax bacilli. If I prepare a microscopical preparation from any organ, the spleen, liver, kidneys, it is of no consequence which is taken, the smallest blood and lymph vessels are seen completely filled with the little rods. In short, I cannot succeed finding any spot in this body that is not filled with anthrax bacilli. Here a look through the microscope suffices to make clear the cause of death. It is at once clear that this enormous mass of bacilli offers such a mechanical hindrance to the whole circulation, and, in consequence, to respiration, that a continuance of life is impossible. This is then the nature of septicæmias, that the

excitors of them, starting from the point of entrance, spread by way of the blood and lymph tracks in countless numbers through the whole system, and so cause death.

I will now inoculate another mouse at the root of the tail with some tetanus bacilli or spores. You see here some animals in which this was done yesterday, the tail and the hind legs are morbidly extended. You observed the difficult coughing respiration. These symptoms will get worse through the night, and early in the morning the mice will have died from inability to breathe. When I dissect the body, as in the other case, I find absolutely nothing in the organs that will explain the grave assemblage of symptoms. If, as in the other case, I prepare a microscopical preparation from the blood in the heart I find nothing deviating from the normal. Especially I miss every kind of bacteria. The blood is completely sterile, but notwithstanding this all these grave general symptoms have been present during life. Here then must be something else that is not visible that has swept over the whole system. And indeed it is very easy to furnish proof of this by submitting the blood to chemical examination.

If I inject the blood of this mouse into a second animal I find, although I am able to satisfy myself that no bacilli are present, that this second animal dies of tetanus, I therefore find a distinctly specific poison in the blood—the tetanus poison. The mouse does not die of the few tetanus bacilli that are introduced into it, and which cannot develop much further within it, but it dies indirectly of the poison which the micro-organisms have produced, and which then sweeps over the whole system. This is an exquisitely toxic disease.

A great deal of work has been done during the past few years towards elucidating the nature of this bacterium poison. The first who adduced proof of a poison separable from the cells of the bacilli was Brieger. Roux and Yersin showed that when diphtheria bacillus culture was passed through a clay filter, and separated from the bacilli, the filtrate freed from germs was able to produce the identical symptoms of disease as did the original culture. It has further happened to Brieger and Fraenkel to afford proof that these substances are albuminous combinations, and the investigators named have given them the names of toxalbumines, and these have since played a great part in medicine.

M. H.—It is easy to understand that from the moment when doubt ceased as to the transmission of most of the infectious diseases from one already diseased to another, when it became clear that these diseases originated through the entrance of something injurious from without, the desire arose to protect the individual from the danger. [The speaker next passed in review the various attempts that had been made in this direction, and referred to Jenner as one whose perfected method, as regarded one disease, was now the common property of every civilized state.]

After Jenner's protective inoculation came a long pause. A new epoch first began when men left the soil of empirics and turned to exact scientific experiments on animals. This began in the year when Pasteur surprised the scientific world by the news that he had succeeded in discovering a means of artificially protecting animals from various zoonosa, fowl cholera, and anthrax. This was the first instance in which practical results were arrived at from experiments with pure cultivations.

Pasteur proceeded from the fact that a mild attack of the disease in question protects against a later disease. [The speaker then described the steps in Pasteur's discovery, and said that, although the success achieved was not an ideal one, the discovery still continued to be of the most wide-reaching importance, inasmuch as people now began to busy themselves with the physiology of artificial immunity.]

One has naturally to face the question, What really happens, then, where such an organism is protected or rendered refractory as regards a certain disease? Two theories were set up as an explanation of the riddle: the exhaustion theory, which did not long hold its ground, and the second the retention hypothesis of Chauveau. The latter, although more satisfactory than the former, did not hold its ground in the presence of the observation that artificial immunity lasted years, and even decades. It was seen that it was rather a matter of permanent influence and metamorphosis of the vital cells. Metschnikoff, the perspicuous champion of the celebrated phagocytic theory,

started from this view. He had observed that, in the case of immune animals, virulent anthrax bacilli, and in non-immune weakened anthrax bacilli, were taken up by most of the elements of the blood and digested as by amœbœ. Supported by these observations, he put forward the following hypothesis: Immunity depends upon the power of certain cells, called by him phagocytes, of taking up bacteria and destroying them. This condition may be congenital or acquired artificially by protective inoculation. This takes place through vaccination, or incorporation of the attenuated excitors of disease. The leucocytes can always overcome these, and they are so strengthened by the single victory, so grown accustomed, that they are able afterward to take up the more virulent germs.

By functional adaptation and selection, this power passes on to the next generation of cells, and so it is possible that the condition may last for years.

M. H.—Here you see the opposite of the two last-named views; on the one side the action of chemical substances only; on the other exclusively the cells of the body; here the humoral, there the cellular.

Buried Alive for Seventeen Days.—The teaching of experience is illustrated by several recent instances of prolonged abstinence, though it may afford some idea of human endurance in this particular under special conditions, has yet provided no certain criterion of the vital resistance possessed by the average man when suddenly deprived of every form of sustenance. The measure of this force may nevertheless be gauged with approximate correctness from the history of recurrent instances of prolonged and accidental privation. As an example the following is remarkable even in this category. It is the narrative of three Bohemian miners who, after being entombed by a fall of sand in the pit where they were working, were finally rescued alive, though, of course, in an utterly prostrate condition, seventeen days later. During the period of their live-burial air was pumped down tu them by bore holes. On this they may be said to have lived without food and without water. The total want of the latter is what makes their survival so remarkable. But for this essential the longer fasts of professional fasting men would have been quite impossible. We can have no difficulty in understanding generally why this holds true, if we bear in mind the fact that not only does water constitute by far the greater constituent of every tissue, but that without its due proportion the circulation and nutrition of the blood, and that needful if costly chemical change upon which all tissue repair depends would be alike impossible. In endeavoring to trace the *rationale* of a life persisting, as in the case of the buried miners, in spite of the absence of every natural condition we must notice one or two significant points. In the first place their condition was that of rest, their functional metabolism being proportionally less active, their waste of tissue diminished and their output of carbonic acid not so likely to overcharge the surrounding atmosphere. Further, we may take it for granted that a robust physique had no small share in the conservation of vital energy. Much depends in such cases on the amount of nitrogenous matter stored up, for the most part in muscular tissue and available for destructive changes. We may safely assume that the amount of reserve nitrogen in the case of these men was not meagre. It is mainly, no doubt, to this circumstance that we must attribute, not only the fact of their existence, but the still more remarkable prospect of their convalescence and ultimate recovery.—*Lancet.*

Heroes and Martyrs.—We deeply regret to have to announce the death of Dr. Tilden from typhoid fever, contracted, it is believed, from bacillary infection, arising in the course of a research which he was conducting on the bacillus of typhoid. Dr. Tilden was intending to bring some of the results of his pathological studies before the meeting of the British Medical Association now in progress at Nottingham. It will be remembered that Dr. Mahomed similarly fell a victim to his scientific and self-sacrificing ardor. Such incidents in the history of the devoted laborers in medical research have been only too sadly common of late. Three students of St. Thomas' have suffered the dangers which the modern heroes of the physiological and pathological laboratory have to face. One—Mr. Lucas—died from infection in studying puerperal septicæmia; another becoming infected with local tuberculosis, was saved by amputa-

tion of the finger, but not without serious constitutional injury. Dr. Spear, one of the ablest of the inspectors of the Local Government Board, died not long since from constitutional infection with anthrax, of which he was making a careful prophylactic study; and another inspector, Dr. Monckton Copeman, only the other day came nigh to a catastrophe from a similar cause. The silent heroism of the medical scientist who pursues knowledge amid much surrounding peril is often passed unnoticed, but is none the less worthy of honor and respect.

—*Brit. Med. Jour.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. Bing, M.D., Chester, Pa., Translator).

Notes Extracted from the Report of the Commission on Cholera (France).—*Treatment:* 1. To stimulate the patient with hot drinks and applications.

2. To arrest the diarrhœa with the following draught: Lactic acid, 10 grms.; syrup, 90 grms.; alcoholate of lemon, 2 grms.; water, 1 litre. Dose, three tablespoonfuls every quarter hour.

For the vomiting, pieces of ice, aërated waters. If menthol were more manageable, Dujardin-Beaumetz would give it the preference. As to opiates, he extols, above all others, the paregoric elixir of the N. Y. and B. formulary, modified by Goblet. Constantin Paul called attention to the fact that cholera cases do not eliminate, and, therefore, caution should be observed in the use of poisonous drugs. Vigier considers the superiority of paregoric elixir due to the antiseptic benzoic acid and camphor which it contains. Beaumetz referred to menthol, and said that by it ipecac may be administered in high doses in dysentery, without causing vomiting. Paul explained the inefficacy of bismuth in cholera by the fact that the drug only acts on the large intestine. Lactic acid, on the contrary, produces its effects in the small intestine, and that is where the bacillus must be attacked.

—*Le Progrès Médicale.*

Formulary: *Purgative for Children:*

℞.—Castor oil..... ℥ss.
Coffee..... ℥ij.
Sugar..... ℥vj.
Yolk of egg..... j.
Make emulsion.

Gastralgia:

℞.—Valerianate of bismuth,
Subnitrate of bismuth.....āā ℥ss.
Ext. nux vomica..... grs. vij.
Ext. gentian..... q. s.
Make fifty pills. Coat with gelatine if desired (capsules). Two to four pills a day.

—*Annales de Médicine.*

News and Miscellany.

Dr. W. Thornton Parker has accepted the invitation of the Faculty of the College of Physicians and Surgeons, Chicago, to deliver the course of lectures on Medical Jurisprudence during the approaching session, 1892–3.

Weekly Report of Interments in Philadelphia, from August 6 to August 13, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	3	1	Enlargement of the heart	1	
Abortion	1		Fever, malarial	1	
Alcoholism	4		" scarlet		7
Apoplexy	12		" typhoid	4	3
Asthma	1		Hernia	2	
Anæmia	1		Homicide	2	
Bright's disease	8	2	Inanition		20
Burns and scalds	2		Inflam'n brain	2	13
Cancer	15		" bronchi	4	3
Carbuncle	1		" kidneys	8	
Casualties	9	3	" liver	1	1
Cerebro-spinal meningitis	1		" lungs	6	7
Congestion of the brain	2	7	" pericard'm		1
Congestion of the lungs		1	" peritone'm	5	1
Child birth		1	" s. & bowels	6	7
Cholera infantum		78	Insanity	1	
" morbus	3		Jaundice		1
Cirrhosis of the liver	5		Lymphadenoma		1
Consumption of the lungs	30	9	Mania-a-potu	1	
Consumption of the bowels	1		Marasmus		27
Convulsions	2	12	Measles		2
Croup		1	Obstruction of the bowels	1	1
Cyanosis		3	Old age	22	
Debility	4	3	Paralysis	8	
Diabetes	2		Pyæmia	1	1
Diarrhœa	3	3	Rheumatism	2	
Diphtheria		18	Septicæmia	4	
Disease of the kidneys	1		Softening of the brain	3	
Disease of the heart	21	1	Suicide	2	
" " spine	3		Sunstroke	6	
" " liver		1	Teething		4
Drowned	5	2	Tetanus	1	
Dropsy	1		Tumor	1	1
Dysentery	11		Uræmia	4	2
Erysipelas		1	Whooping-cough		3
			Total	251	253

OF THE FOREGOING THERE WERE:

Under 1 year	140	From 40 to 50	35
From 1 to 2	53	" 50 to 60	35
" 2 to 5	22	" 60 to 70	40
" 5 to 10	15	" 70 to 80	36
" 10 to 15	7	" 80 to 90	17
" 15 to 20	16	" 90 to 100	4
" 20 to 30	41		
" 30 to 40	43	Total	504

Males, 270; females, 234; boys, 137; girls, 116.
The number of deaths, compared with corresponding week of 1891 and of last week, was as follows:
Week ending August 15, 1891, was 532.
Week ending August 6, 1892, was 693.
By order of the Board of Health,
MOSES VEALE,
Health Officer.
Attest:
J. V. P. TURNER,
Chief Registration Clerk.

PROPOSED INTERNATIONAL MEMORIAL OF SEMMELWEIS.—At the invitation of Sir Spencer Wells, a preliminary meeting was held at his house on July 25, to consider a proposal to erect in Buda-Pesth a memorial statue to commemorate the work of a man who may be justly called the Father of Antiseptic Midwifery. It was Semmelweis, as is well known, who first demonstrated the true cause of puerperal fever. By the practical application of his teaching on the subject, the mortality of parturient women in the Vienna Lying-in Hospital was reduced from more than 16 per cent. to 1.27 per cent. in less than two years. In the words of Hebra, in 1849, "The importance of his work for the maternity department and for hospitals in general, but particularly for the surgical wards, is beyond calculation, and not only worthy of consideration by all men of science, but of special appreciation by the Government." Nothing has been done since the death of Semmelweis, in 1865, to perpetuate the memory of so great a benefactor of the human race. By the desire of the Central Committee in Buda-Pesth, Sir Spencer Wells has inaugurated a movement here, and it has been decided to call a meeting, in London, towards the end of October, when various proposals may be fully discussed. At the preliminary meeting there were present: Dr. Duka, representing the Hungarian center; Dr. Black, President of the Obstetrical Society; Dr. Glover, Dr. Graily Hewitt, Sir Joseph Lister, Bart., Dr. Playfair, and Dr. Priestley. Dr. Boxall, Hon. Sec., read letters expressing approval of the scheme, and regretting inability to attend, from Sir Andrew Clark, President of the College of Physicians; Sir R. Quain, President of the Medical Council; Sir James Paget, Dr. Herman, Dr. Cullingworth, Dr. Routh and Dr. Champneys. Any one desiring further information should communicate either with Sir Spencer Wells, or with Dr. Boxall, or Dr. Cullingworth, who are kindly acting as Honorary Secretaries until the first meeting.—*Brit. Med. Jour.*

THE BRUSSELS OBSTETRICAL CONGRESS.—The programme of the proceedings of this Congress was issued at the end of last week by the President, Professor Kufferath, and the General Secretary, Dr. Jacobs. The sittings of the Congress will commence at the Palais des Académies on Tuesday, September 13, at 9 P.M. The Belgian Gynæcological and Obstetrical Society will give a concert in honor of the members of the Congress on the Wednesday at 2 P.M. The Congress will be declared open in the presence of King Leopold II. The exhibition will include an international display of instruments and apparatus at the Palais des Académies, and a special exhibition of specimens and instruments, contributed by the Belgian universities, and held at the Brussels Maternité. On the Thursday, Friday and Saturday the ordinary sittings will be held, general communications being read between ten and twelve, whilst special subjects chosen for discussion will be brought forward in the afternoon. The order of these subjects is as follows: Thursday, September 5, Pelvic Suppuration, introduced by Dr. Segond, of Paris; Friday, September 16, Extra-uterine Pregnancy, by Dr. Martin, of Berlin; and Saturday, September 17, Placenta Prævia, by Dr. Berry Hart; on Thursday, at 9 P.M., the Minister of Public Works will receive the members of Congress at his official residence; on Friday, at 7 P.M., there will be a special performance at the opera; and on Saturday evening the Belgian Gynæcological and Obstetrical Society will give a banquet. Subscriptions may be sent by post office order to the General Secretary, Dr. Jacobs, 12, Rue des Petits Carmes, Brussels. After September 12 they may be paid at the Secretary's office. Further information will be supplied on application to the General Secretary at the above address.

—*Lancet.*

ARMY, NAVY AND MARINE HOSPITAL SERVICE.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from August 9 to 15, 1892.

Leave of absence for twenty-one days, to take effect upon the completion of the bond of Captain Harry O. Perley, Assistant-Surgeon, U. S. Army, is granted Colonel Charles T. Alexander, Assistant-Surgeon General, U. S. Army.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
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The Times and Register.

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PAGE

ORIGINAL ARTICLES:

BEDFORD MINERAL SPRINGS. By William F. Waugh, A.M., M.D. - - - - - - - - - - - - 241

MODERATE AND MILD *vs.* STRONG CURRENTS IN ELECTRICAL APPLICATIONS. By W. H. Walling, M.D. - - - - - - - - - - - - - - - - - - - 243

DOSMETRIC MATERIA MEDICA. By Chas. Everett Warren, M.D. - - - - - - - - - - - - - - - 245

EDITORIAL:

MEDICAL PROFESSION AND POST-GRADUATE EDUCATION - - - - - - - - - - - - - - - - - - 249

LETTER TO THE EDITOR:

Reply of Dr. Blackwood to Dr. Sangree's Letter of the 20th inst. - - - - - - - - - - - - - - - 249

PAGE

THE MEDICAL DIGEST:

Asiatic Cholera (*Mitchell*)—Physicians Not Among the Millionaires (*Post Graduate*)—Treatment of Apparent Deaths from Drowning (*Laborde*)—Saline Enemata in Acute Anæmia (*Neustube*)—Atresia After Labor (*Petit*)—Hygiene and the Physician (*Culmer*)—Some Points in the Study of Uric Acid (*Denver Medical Times*)—Matteism: An Exposure (*Potter*)—The Etiology and Prevention of Dental Decay (*Sewell*)—Abdominal Massage (*Ivanoff*)—Chronic Gout (*Garrod*) - - - 248, 253-265

MEDICAL NEWS AND MISCELLANY - - - - 265

ARMY, NAVY, AND MARINE HOSPITAL SERVICE - - - - - - - - - - - - - - - - - 265

NOTES AND ITEMS - - - - - - - - - - - - iv, x

Original Articles

THE BEDFORD MINERAL SPRINGS.

BY WILLIAM F. WAUGH, A.M., M.D.,
PHILADELPHIA.

NO American mineral water compares in value or in reputation with that of the Bedford Magnesia Spring, while in Europe none rivals it except the Carlsbad. The Bedford spring issues from the rock at the base of the mountain, through an opening three feet long and eighteen inches wide. It discharges water at the rate of a barrel a minute, without any perceptible variation or interruption.

The crystal purity of the water is un affected by the heaviest rainfall. The water is a calcic magnesian, entirely free from organic matter, and with about one-quarter of a grain of iron to the gallon. It is a gentle laxative, acting specially on the liver and kidneys. Under its use the tissues are denuded of water, the products of waste and of disease are washed out, while the cellular tissues of the body are strengthened by the absorption of lime into the cell walls. The combination of a depurative agent with a reconstructive is rarely to be found in natural waters, and renders this one suitable for many cases of anemia and debility in which the ordinary salines cannot be employed. On the other hand, the absence of iron renders Bedford water a safe and efficient remedy for those plethoric and gouty persons, who could not take a chalybeate water without danger of apoplexy.

The principal indications for the Bedford magnesian water may be briefly summarized as follows:

1. In diseases of the liver it stimulates the secretion of bile and hastens its outflow.

2. In kidney diseases it washes all obstructing matter out of the uriniferous tubules, increasing the solvent power of the urine and flushing the whole urinary tract.

3. In digestive derangements it stimulates the secretion of all the digestive ferments, and increases the appetite by its depurative action.

4. In all cases where there is a taint of scrofula, syphilis or malaria, lead, mercury or arsenical toxemia, in rheumatism, gout or uricemia, the water washes out of the body the toxic elements, and aids greatly whatever other remedies may be required.

5. In catarrhal affections generally, the action of other remedies is greatly enhanced by the use of this water, relieving congestion and stimulating absorption.

6. In anemic cases, convalescence from acute diseases, debility, atony, and enfeebled conditions generally, the use of this water is beneficial, as it keeps the alimentary canal clear, removes noxious substances from the blood, and stimulates the absorption and assimilation of nutritive elements. It has long been known that iron is rendered more useful by administering salines with it, so that "Dunglison's Saline Chalybeate," and "Flint's Saline Chalybeate," are prescribed by hosts of physicians. The Bedford calcic-magnesian water in connection with iron, forms a most admirable combination for the conditions enumerated in this paragraph.

7. Many nervous conditions, such as neurasthenia, insomnia, melancholy, irritability, headaches, neuralgia, etc., etc., are really due to some one or more of the conditions noted above, and are consequently benefited by this water. But as the pure mountain air is a powerful agent for good in these cases, the benefit derived from the water at home cannot equal that obtained during a residence at the Springs.

8. Those who are well have no need of any medicine. But, setting aside the question of whether perfect health ever exists, many persons are firm in the conviction that a course of Bedford water is useful as a prophylactic. When we find men of far more than average intelligence, who have taken the water every summer for forty years, and bring up their children in the same habit, there is at least reason to inquire into the grounds for their belief. Our fathers claimed that the Lenten fasts and the spring venesection were of use in the same way; and there is a widespread belief that they were not altogether mistaken, and that we have dropped these measures without sufficient cause. This belief in the efficacy of Bedford water as a preventive of diseases and as conducive to long life, was shared by Simon Cameron, Thaddeus Stevens, and many other notable men. "If I could only get to Bedford, I would be sure of another year," has been the cry of many a habitué of the Springs.

The Magnesia water should in general be taken only before breakfast. A glass should be sipped at intervals, occupying five or ten minutes in drinking it. This should be followed by ten to twenty minutes' exercise, graduated to the strength of the individual. A second glass is then to be taken, if needed, in the same manner as the first. Few persons require a third glass; still fewer a fourth. The object to be attained is to produce one free evacuation of the bowels, and only one, just before or after breakfast. Any action beyond this is to be avoided. The laxative effect of the water is gentle, and must be aided by the influence of habit, the patient going to the closet at the same hour every day. If two or three glasses prove insufficient, it is better to take a pint of mineral water, cold, by enema, with a teaspoonful of table salt added to it. This acts with certainty, and is preferable to flooding the system with large volumes of water. If the water is to act on the bowels, it should be taken cold; if to act rather on the blood, it is best to have the water heated. In all cases it must be slowly sipped; not tossed off at a draught. Under no circumstances should the water be taken at any time after breakfast, unless so ordered by the physician. When the action has been once obtained, the body should have a day's rest before the dose is repeated. Taken at bedtime, the water causes nervousness and insomnia; as at that time the glandular apparatus should be quiet. In cases of gall-stones, much larger quantities of the water are required; as the object is different.

The water of the Pure Spring forms the ordinary beverage of visitors at the Springs, except when otherwise ordered. Being almost identical with distilled water (and purer than most of the distilled water sold), it is of value in flushing the system, in Bright's disease, uric acid diathesis, gout, etc.

The water of the Sulphur Spring contains that element in its most potent

form. This water should never be drank except on the advice of a physician. Sulphydric acid being a protoplasmic poison, the water is destructive to the blood cells and breaks down tissues. For this reason it is a valuable remedy in plethora, obesity, and in the treatment of scrofula, syphilis, skin diseases, and suppurations. Externally, it has acquired quite a reputation as a beautifier, removing blotches, pimples, etc., and rendering the skin white and smooth. It is also of value as a bath for rheumatism, gout, and the affections for which its internal administration is commended. The sulphur water should be drank in smaller quantities than the magnesian; half a glass some time before breakfast and on going to bed, being the usual method of taking it. But as this water contains nearly as much magnesia as the great spring, it is probable that the dose of the former also should be taken in the early part of the day. This water is of considerable value for baths; and in all the affections for which it is indicated, it should be also employed externally.

Whether tubercular affections are benefited by sulphydric acid or not is still an unsettled point.

The water of the Chalybeate Spring contains about half a grain of iron carbonate to the gallon. It should be drank *ad libitum* by those who require iron. It is very pleasant to the taste, and is an excellent adjuvant where more powerful chalybeates are required. But small as is the amount of iron in this water, its effects when drank for some weeks are quite marked. It is also employed with advantage as a bath.

The "Cold Spring" is so heavily charged with calcic salts as to render it unsuitable for ordinary use; but for those who need lime, it shonld be used habitually as a beverage, in connection with the magnesian water. Nursing or pregnant women, and those suffering from wasting diseases, may drink this water with advantage. Scrofulous children are especialiy benefited by it.

Besides these, there are nearly 100 springs on the Bedford property; the constituents of which are unknown. From the remarkable variety found in the waters already analyzed, it is possible that the others may contain elements of value. Traces of lithia exist in the magnesia and the sulphur waters, and this valuable element may be found in larger proportion in the other springs. The "Black Spring" bursts out from under the roots of a huge oak, on the mountain side, and pours forth a stream of pure water sufficient to supply all the wants of a town of 10,000 inhabitants It has been proposed to utilize this stream to run an electric plant, for lighting the hotel and operating an electric street car line connecting the hotel with the town.

MODERATE AND MILD *vs* STRONG CURRENTS IN ELECTRICAL APPLICATIONS.

By W. H. WALLING, M.D.,
PHILADELPHIA.

THE forces of nature act, as a rule, in a gentle, and scarcely perceptible manner. When, however, any violent disturbance takes place, the reaction is as marked as the excitant form, and in some instances, seemingly, more so. This is nowhere more apparent than in the application of the electrical current to the delicate structures of the human body. The advocates of intense currents were greater in number at a not very remote period than, fortunately, they are at present. The imitators of Apostoli—and their name is legion—frequently insist upon giving powerful currents simply because that famous man once did the same, and probably for no other reason.

Whilst I do not condemn very strong currents when really indicated, yet, as a rule, I do condemn them.

What constitutes a strong current in gynecological application? One will say, two hundred and fifty milliamperes; another, one hundred and fifty; another, five hundred milliamperes must be reached before it may be classed as being very strong. For my part, I draw the line far below any of them. In fact, I have seen reported cases where fifty milliamperes was strong.

The strength or intensity of the current must be in exact proportion to the needs of the case, whether it be one milliampere or one hundred. If only one milliampere is indicated, two milliamperes would be strong for such case, and this is to be determined by a previous examination and diagnosis not only physically, but electrically. Just as it requires practical skill in order to make a proper physical

diagnosis, just so it requires an especial training and experience in order to make a proper electrical diagnosis.

In all my practice in the treatment of fibroid tumors, I never exceeded one hundred and twenty-five milliamperes, intra-uterine application, and I reached that limit but once only. All of my applications, aside from that single instance, were made with currents not exceeding seventy-five milliamperes, and generally, with an intensity of but thirty to fifty milliamperes. And I gained good results. Cases that showed either very severe reaction, even to peritonitis, under other operators, who used one hundred and fifty to two hundred milliamperes, not only showed no untoward spmptoms under my moderate treatment of thirty milliamperes, but made substantial progress in the right direction.

It is not, however, in the gynecological field alone that good results are obtained by moderate currents. Many, if not most, neurological cases do far better under mild applications, than under even what most would consider moderate currents.

I might cite case after case that has come under my observation and treatment, but shall confine myself to but two from each class—gynecological and neurological.

Mrs. B., aged forty years, had been under treatment for a fibroid enlargement of the uterus, for quite a period, and had been receiving a current intensity of one hundred and fifty milliamperes at each sitting. This was followed by days in bed, suffering from what appeared from her statements to be peritonitis. There was but little, if any, diminution to the tumor. In fact, so great was the reaction after the heavy currents used, that the wonder was that the tumor did not actually increase in size. Coming subsequently under the care of the writer, she was given but thirty milliamperes three times per week, resulting in great amelioration of the symptoms, and gradual reduction of the tumor. The desirability of moderate, or even mild currents, was fully demonstrated in this case.

Mrs. C, aged thirty-eight years; mother of two children; since the birth of the second child she had suffered from an increasing fibroid enlargement of the uterus. She was pronounced incurable by a prominent gynecologist. Without going into details, suffice it to say, that after about eight months of intra uterine applications, with a current intensity not exceeding thirty milliamperes, she was entirely cured. The uterus became normal. This statement was verified by another prominent gynecologist, who examined the patient at my request, without knowing her previous condition.

J K., aged thirty years; laborer; suffering from locomotor ataxia, the result of exposure and excesses. Both the galvanic and Franklin currents were used in this case, and mild, descending galvanic applications, not exceeding five to ten milliamperes, gave more relief than stronger ones. Also, contrary to most text books, a mild spark, one-quarter to one half-inch in length, gave better results than stronger ones. He improved steadily under the mild applications.

G. F., aged forty years; engineer; suffering from lateral spinal sclerosis. Spastic gait; knee jerk enormously exaggerated; contraction of flexor muscles of both legs; toes drag on the ground, and can scarcely get his heels to the pavement. Has been under medical treatment for a long time. Came under the writer's care in December, 1890. Careful electrical examination pointed to mild, descending galvanic currents, and but five milliamperes were used for a long time; treatments being given three times each week, during the winter. There was marked improvement. During the summer the applications were discontinued, but resumed in the fall and continued quite steadily, some weeks the patient receiving treatment every day. In December, 1891, thinking to push matters faster, and in deference to the opinion of others, a current of fifty milliamperes was given for one or two minutes upon two occasions. The first application of this intensity produced an apparent remarkable improvement, the patient saying that he had not walked so well in years. The second strong treatment operated in directly the reverse manner. He was injured, seemingly, beyond repair, and I never succeeded in bringing him up to the good condition he was in at the time of the first strong application.

The question was asked me, "What good can you expect, in such a case, from so insignificant a current as five milliamperes?" My reply was, "I know from the excellent results obtained." It is results, good results we strive for, in all our treatments, and when five, three, one, or even one-half a milliampere give me good

results, why should we jeopardize the case by attempting more?

Dr. Sperling, a translation of whose paper appears in the *Journal of Electro-Therapeutics*, for July, 1892, reports a case of locomotor ataxia where very mild currents of galvanism gave most excellent results after strong currents had been used to great disadvantage. Also, other cases of differing complaints, where currents of one half and one milliampere for one minute gave satisfactory results.

Such doses of galvanism seem, to most operators, as being so very small as to be practically worthless, but when we consider that there is voltage, amperage, and sufficient coloumbs behind such current to force it through the resistance offered by the body, we get an appreciable quantity and intensity, and if it be enough, as it is in many cases, to get the desired effect, it is the proper current to use.

The great nervous centers, in many persons, are very susceptible to the effects of the electric current. They are adversly affected in many conditions, reflexly, by strong electrical applications to remote parts of the body. It is true, also, that many persons will sustain heavy shocks from a dynamo without apparent injury, but we are dealing with pathological conditions in the application of medicinal electricity, and we should be very sure of our ground before entering upon it. I cannot too strongly emphasize the absolute necessity of all beginners using very mild currents, when using electricity upon the sick.

DOSIMETRIC MATERIA MEDICA.

By CHAS. EVERETT WARREN, M.D.,
UNION PARK, BOSTON, MASS.

ACID, ARSENIOUS.—A re-constituent of the blood. Indicated in palustral diathesis and rebellious fevers with anæmia, engorgements of the portal vein, in hypochondriasis, and all states of the system where there is an impoverished blood supply; in affections of the skin, resultant from a dyscrasia; in ataxic and adynamic fevers, in typhus and typhoid fevers, pernicious fever, cholera, yellow fever, the plague, etc.

In acute cases, one granule should be given every half hour until the cessation of the febrile conditions; in chronic cases, ten to twenty granules daily.

As arsenious acid increases the oxygenation of the blood, it may be given conjointly with the arseniates of iron, soda, antimony or potash, in dyscrasias and chloro-anæmia. For the same reason it is useful in combination with strychnine or quinine in rebellious and indolent fevers.

In pyrexia, one granule every half hour is indicated to cessation of fever; in dyscrasias, up to twenty granules a day.

Acid, Benzoic.—Possibly useful in affections of the urinary passages; but on account of its slight solubility, the salts (benzoates, q. v.) are preferable. It increases the urinary secretion. Ten to twenty granules a day.

Acid, Phosphoric.—Indicated in sclerosis, amblyopia, etc., conjointly with strychnine. Ten to twenty granules a day.

Acid, Salicylic.—Indicated in zymotic affections, counteracting putridity and ataxia, especially in gangrene, typhus, etc. Ten granules a day, two at a time, every hour.

Acid, Tannic.—Indicated in mucous relaxation as an astringent. Ten to twelve granules a day.

Aconitine.—A sedative, acting on the vaso-motor system. Indicated in pyrexia, to reduce increased body heat; to the physiological mean, one granule every quarter or half hour, according to the severity; in congestive lesions of the respiratory and circulatory systems; in renal hyperæmia, conjointly with digitaline; in congestive spasms; in irritative lesions of the skin; in neuralgia and rheumatic affections against pain and irritative congestion.

It is a substitute alternative for veratrine, (q. v.); one granule every hour or half hour to sedation of symptoms.

Antimony, Arseniate.—In addition to the properties of arsenious acid (q. v.), this salt acts especially upon the bronchial mucous tissue, and is therefore indicated as a re-constituent and expectorant in chronic bronchitis and pneumonia, and in pulmonary tuberculosis. It is also recommended in organic lesions of the heart. Like all arseniates, it increases nutrition and sanguinous oxidation.

Apomorphine.—An emetic indicated especially in children, in bronchitis and pneumonia. One granule every half hour.

Asparagine.—Of slight activity, but in a degree a substitute for digitaline and colchicine. Indicated in affections of the urinary passages, and as a diuretic in

anasarca, albuminuria, etc. Ten to twenty granules a day.

Atropine.—A sedative of the muscular system. Indicated in acute or tonic spasms, tetanus, hydrophobia, photophobia, misere, ileus, and internal or external constrictions, in internal spasms, cardialgia, gastralgia, enteralgia, cystalgia, and angina, especially as a preventive of the angina of scarlet fever, sequellant or concurrent; in neuroses, hysteria, epilepsy, etc. See hyosciamine.

Atropine Sulphate.—Same indications and same doses as atropine.

Atropine Valerianate.—This happy combination of valerianic acid and atropine is better than the plain atropine, daturine, or hyosciamine, in the neuroses already cited, epilepsy, chorea, hysteria, etc. Given in the same doses.

Benzoates (*Lithia*, *Ammonia*, *Soda*).—These have the quality of the acid but are more soluble and, therefore, better for neutralizing the acidity of urine, thus rendering it neutral. The salt of ammonia is preferable in typhoidal affections, while the lithis and soda are indicated in uræmia in doses of ten to twenty granules per day.

Bismuth Subnitrate.—An astringent whose prolonged use in massive doses may induce colic or gastritis, or even gastro enteritis. Indicated alike in gastralgia and enteralgia. It should always be combined with morphine, codeine, camphor, monobromate, or croton chloral.

Brucine.—Excitant of the muscular system, especially advantageous for children. Indicated in capillary bronchitis and pneumonia in its first and last stages to favor expectoration and prevent paralysis; also in nocturnal losses due to weakness. When there are concurrent spasms atropine is indicated, one granule every two hours. See strychnine.

Bryonine—May possibly relieve torpor of the large intestine acting especially upon the cæcum and thus favoring digestion. Six to eight granules a day when the stomach is oppressed, especially in hypochondriasis. It may be given with advantage in conjunction with jalapin, one hour after meals.

Cafeine.—A brain and cardiac stimulant indicated in cerebral torpor and in accidental lesions, sunstroke, coma, somnolence, and nervous migraine of an exhaustive type and in "brain fag." One granule every half hour.

Cafeine Arseniate.—Stimulates the stomach and brain, and thus indirectly acts upon the entire economy. Indications same as for cafeine (q. v.), but in smaller doses on account of the arsenical element which renders it more active as a reconstructive tonic.

Cafeine Citrate.—More soluble than the pure alkaloid it is more efficacious, efficacious in the same indications, especially in cephalic congestion, migraine, etc. Five to ten granules every half hour.

Cafeine Valerianate.—Preferable to plain cafeine, citrate or arseniate, in the treatment of migraine associated, if desired, with the arseniate of cafeine, with quinine, rendering its action more powerful.

Calabarine, Sulphate.—Contracts the pupil, and is indicated for this reason as an antagonistic to toxic effects of atropine, daturine, and hyosciamine.

Calcium, Sulphide.—Is specific in diphtheria and croup, given in doses of ten to twenty granules a day, according to age.

Calomel.—Acts as a solvent of fibrine, of the blood, in inflammations, especially serous, indicated in meningitis, pleurisy, carditis, pericarditis, etc. Being but slightly soluble it may progressively accumulate in the system, especially in the liver, and thus lead to destructive results. Salivation, with its terrible results, cries caution in its use, a danger which is avoided in dosimetric exhibition, especially when combined with neutral sulphate or magnesia as a mild and harmless cathartic. Calomel is indicated in dermatoses, especially of the dry type, lichen, dartus, etc. The dose should not exceed ten granules a day.

In children it is useful as a vermifuge, four to six granules a day, according to age.

Camphor Monobromate.—A sedative of the genital system, preventing nocturnal pollution, in conjunction with atropine, one granule of each every hour. In satyriasis, nymphomania, hysteria, and the like, twelve granules a day.

Chloral, Croton.—Sedative and anesthetic in conjunction with iodoform (q.v.).

Cicutine.—Sedative in abnormal sensibility and contractility. Indicated in affections of the spinal cord, with reflex action, in intercostal neuralgia, angina, dental pain, otalgia, and pain of cancer. It quiets and regulates the circulation. One granule every half hour in acute

lesions; one granule every hour in chronic cases.

Cicutine, Hydrobromate.—Especially advantageous in tuberculous meningitis. Decreases fever and is a sedative to the nervous system without the reaction of morphine. It may be safely used in diseases of children with hyperæsthesia. One granule every half hour in acute cases; four, six to eight or ten granules in chronic cases per day.

Cocaine.—A nervous excitant and stimulant, with a concomitant sedative action, analogous to caffeine, guarinine, etc., indicated as a gastric tonic in apepsia, dyspepsia, chloro anæmia, etc., one to five granules every hour.

Codeine.—An excellent sedative of the nervous system, especially in peripheral irritation, without the reaction of morphine. Indicated in irritation of the primary passages conjointly with iodoform (q. v.). Four to six granules ordinarily suffice as a sedative.

Colchicine.—A diuretic and supstitutive alternative for digitaline (q v.) indicated in acute rheumatism and gout; one or two granules every half hour in acute cases; ten a day in chronic.

Colocynthine.—A tonic laxative, acting on the small intestine. Indicated in all cases of sluggishness or atonicity of the intestinal tract, alone, or in combination with jalapine, bryonine, cyclamine, euonymine, elaterine or podophylline. All of these agents demand the exhibition of a vital incitant or reconstituent. Four to eight granules a day should be given.

Cubebine.—The peppers have a very heating action which makes them efficacious in the treatment of acute blenorrhagia. This action is common to the whole plant and not alone to any one of the extractive principles. Cubebine has this quality in a small degree only, even when given in doses of twenty to thirty granules a day. Its action is more marked on the urine, rendering it more alkaline and fluid, and therefore less irritating, on account of increased transudation from the genito urinary tract. To produce any effect as many as fifty granules a day must be given. It does not cause colic or diarrhœa like copaiba, which also produces an eruption, and is favorable to the resolution of certain diseases, notably suppurative bronchitis when it has reached a stage where phthisis is imminent.

Cyclamine.—Laxative in small doses, purgative and even drastic in large doses; recommended in constipation. *Vide* colocynthine and elaterine.

Daturine.—A substitutive alternative for atropine and hyoscyamine (q. v.). Same indications and same dose.

Diastase.—Indicated in apepsia; three or four granules a day, at meals, twelve a day.

Digitalin.—The heart sedative *par excellence* and a regulator of the system in general; it increases diuresis by diminishing intravascular pressure. The action of digitalin should not be confounded with that of digitalis, since the latter may be fatal in its effects, causing paralysis of the heart and anæmic vertigo of the brain. Amorphous digitalin is more violent in its action than crystallized digitalin, which has a purely physiological action, sedative and regulative. It is therefore especially indicated in that state of vascular erethism which precedes and accompanies inflammation. It is also useful in organic maladies combined with matallic preparation, iron, arsenic, etc., or with a metalloid, iodide, bromide, etc. In acute cases one or two granules are indicated every half hour until the pulse decreases in rapidity and the morbid caloric is decreased. In chronic cases four to six granules a day may be given.

Elaterine.—This is indicated as a hydragogue, especially in essential hydropsies. The dose is eight granules, upwards, a day, alone or combined with digitalin (q. v.), the dose of which should not exceed four granules a day.

Emetine.—The active principle of ipecac without its violence and without contrastimulant qualities. It is a preferable substitute for tartar emetic, the boat in which so many victims have been ferried over to the other shore, that Guy Patin suggests the name "tartar stygian." Emetine is indicated when there is embarrassed respiration, in capillary bronchitis, and in pneumonia, whether at the beginning to decrease the fever or at the end to favor expectoration.

Ergotine.—Does not have the dangers of crude ergot, which, similar to poisonous mushrooms, produce gangrene of the feet and toes. Black coffee happily counteracts this danger in a degree, and we find the eaters of ergotized rye free to a certain extent from the deleterious results. The emenagogue action of ergo-

tine is very marked, congesting the uterus as it does, and thus preparing it for the menses. In prolonged use in amenorrhœa it may begin with twelve granules a day. In dysmenorrhœa it should be given with hyosciamine, and sometimes cicutine.

Euonymine.—Laxative, diuretic and expectorant; indicated in dyspepsia accompanied with constipation. It is also recommended in intermittent fever and in pulmonary affections.

Gelsemine.—A nervous vaso-motor sedative, similar to aconitine, having antipyretic properties. Indicated in odontalgia and neuralgias of all descriptions (facial, intercostal and sciatic). One granule every quarter or half hour.

Gregory Salt.—A combination of codeine and morphine, combining the qualities of the two alkaloids. An excellent sedative for the night. It is indicated in doses of four to six granules, by twos at half hour intervals.

Guaranine.—Has relatively the same properties as caffeine, theine and theobromine, cocaine, etc., that is, a tonic stimulant; in addition it is slightly valuable as an astringent in diarrhœa.

(TO BE CONTINUED.)

ASIATIC CHOLERA.—Dr. R. W. Mitchell has had success with the following (Memphis *Med. Mo.*):

℞.—Acidi sulphurici dil..... ℥ss.
Morph. sulphat..... gr. ⅓.
Spts. vini gallici..... ..... ℥iss.
Aquæ destillatæ..... ℥iij.
M.—Sig. Inject under the skin of the arms, legs, and over the stomach every hour until symptoms of the disease are relieved.

—*Med. Review.*

PHYSICIANS NOT AMONG THE MILLIONAIRES.—A recent and interesting feature in one of the daily newspapers of New York, was a list of the millionaires of the country. A friend who looked over it with care, says that he did not find the name of one practising doctor in the list, while many lawyers figured there. The names of clergymen and physicians were conspicuous by their absence. Much as is said by some rich and well-to-do persons and witty journalists, about the enormous fees received by consulting surgeons and physicians and specialists, these fees in reality do not at all compare with those obtained by lawyers of like reputation and rank. A successful man in medicine, whether eminent or not, may only expect a very good living, such as is obtained by the well-to-do people of his vicinity, together with the ability to leave a moderate resource for his family.

But, in order to accomplish this, the doctor must not die in early middle life. A man who does not live to be fifty-five or sixty years of age, and depends alone upon his practice for an income, does not ordinarily leave anything for his family. It is a fact that physicians' fees, however high they may seem to a jury of day laborers or clerks, are usually very low, when the time and money spent in acquiring an education and skill, and what is otherwise involved, are considered.

Laymen cannot easily be made to realize that the vast majority of physicians give from one-third to one-half of their professional hours of work for no direct pecuniary return. Of course, there are a few men here and there, who do nothing of this kind, but where is the reputable country or village practitioner that does not give his services without fee, right and left, whenever those in bodily pain or anguish call for him? In cities and towns, the proportion of time given in gratuitous service, not only to the poor in dispensaries and hospitals, but also in private practice to the "respectable" poor, decayed gentry, and so forth, is also very large. May it ever be so. *Noblesse oblige.* Let us never grumble at this part of our lot, but let us abate nothing of just demands for our services from those able to pay us, whether they are willing or not.

Within the present year, the wife of a prominent city official who gets ten thousand dollars a year salary, appeared at one of our public institutions, where the poor, and the poor only, are given medical care, with her child, for whom she sought gratuitous advice. The applicant answered the usual questions, which are carefully asked, as to her husband's income and occupation, before she obtained a ticket. Of course the questions were not honestly answered. It was only because the attending surgeon of the outdoor department found the case a serious one, requiring hospital care, that the mother, being frightened, confessed that she was able to pay if attention could be given at her home.—*The Post-Graduate.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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MEDICAL PROFESSION AND POST-GRADUATE EDUCATION.

FROM time to time of late years, particularly about this season, inquiries are made of us as to the best school to enter to pursue a course of post-graduate study.

Modern science and the enormous stride of modern research have so extended the scope of the different branches of medicine, that the graduate of but a few years since is almost nowhere when he looks about him, and sees the old land-marks of his time so rapidly fading out of sight to make way for those which are rapidly occupying their places.

To the wide-awake, progressive practitioner, who is not content to follow in the furrows of the past, but is ambitious to keep abreast with the times, an occasional "brushing up," dissection on the cadaver, microscopical examinations, analysis of the animal fluids, and attendance on clinics, medical and surgical, are quite indispensable.

But to what city, what section of the country, and to what hospital shall he go?

To the general practitioner, we say, go home! Or, perhaps, to make it more clear and emphatic, we repeat, go to any hospital or college which have an ample corps of teachers and plenty of clinical material.

The learned veteran, now passing close to the meridian of life, finds it wholly useless, even though it were possible, to sit on the benches to hear lecturers talking against time.

He wants to attend all the clinics he can; perhaps walk the wards, and do some quiet laboratory work and little else.

There is no good reason why all clinics in every city should not be free, and always open to any regular graduate in medicine, without a farthing's expense.

And, as a matter of fact, this is practically so in this country.

Every possible facility is extended in foreign countries, in the hospitals, to visiting physicians to attend clinics, and in some of the largest hospitals in Europe one is free to walk the hospitals until he is tired, without let or hindrance. Go then to Philadelphia, New York, Chicago or Boston, attend the clinics and take a course in laboratory work. Of course, to one who is about to qualify for a specialty, he must intimately associate himself with his teacher, and arrange for years and not a week's sojourn at special operations.

Letter to the Editor.

REPLY OF DR. BLACKWOOD TO DR. SANGREE'S LETTER OF THE 20TH INSTANT.

IT would have been better for Dr. Sangree to have definitely referred in his first complaint to the battery condemned in his strictures, in the first place; and thus not have reflected on other makers of dry-cells; and in the second to have answered what I did say (if not agreeable to himself), instead of trying to put words into my communication which I did not say, because the readers of THE TIMES AND REGISTER have only to take the two numbers up to see that no such language was used by me as that ascribed by the Doctor when he writes, "it is not every practi-

tioner that is able to afford a room full of them, *a la* Dr. Blackwood, in order to pick from the lot that which is best." My office is so arranged as to convey the idea that it is simply a parlor or reception room, and it is free from all advertising in the shape of machinery or professional traps on tables, book-cases, or other furniture. I have many times referred in articles to what I use in the shape of mechanism, and to allay any apprehension on the part of my friend in this direction, I may say that my main office battery consists of one hundred and fifty Leclanche cells; with these is arranged a set of a hundred more for experimental work, these being in the cellar; the whole is so managed by a switch-board as to allow any number from one to the maximum to be used for any desired purpose. Then comes a set of four differentially built faradic coils, one simple coil and a static machine, that is all; it leaves lots of room for my patients and myself to amuse ourselves, or to transact such business as may properly come before us. For portable use, I have four galvanic and one faradic, all chloride of silver.

I said in my letter that I did not know the exact construction of the new cells, and that I would anatomize one or two at my leisure. The makers of the apparatus have very courteously placed their factory at my disposal for study and observation, and through their representative, Mr. H. G. Ensor, they sent to me a number of cells for experimenting. With the utmost candor and fullness the gentleman named answered all my queries concerning the matter; he volunteered much that I did not look after; in short, no one could possibly be more open, more candid, or more explicit than Mr. Ensor was, and I am now able to say a good deal that heretofore I could not, and all of it in favor of the apparatus. As I said, one reason for the change from hard rubber to the new style was in the interest of economy—the rubber was unnecessarily expensive, but the main factor was to overcome the difficulty of sealing the cells air and water-tight; this was impossible with the rubber, as I know from experience myself. Now, the cells have four separate seals inside, and when thus fixed they are wrapped with a coat of yellow wax and a little paraffine (I think), as I do not recollect the exact formula which Mr. Ensor gave me. The cell is of glass, rather thicker than that of test-tubes; it is $2\frac{1}{2} \times \frac{5}{8}$ inches; in the faradic blocks this glass cell is enclosed in a brass cylinder, much like a a cartridge shell; in the galvanic boxes it is wrapped with the waxen compound, and it is absolutely tight.

The electrodes are a bar of fused chloride of silver, and one of zinc; the electrolyte is essentially a paste of zinc-sulphate. The resultant of decomposition is metallic silver. The electro-motive force carefully measured is over one volta per cell—seventy-nine for fifty in good order, having been used for some three hundred hours before testing. I dropped a cell without the brass cover to the carpet, from a height of three feet, without its breaking; then on to the bare floor from the same distance, when it cracked. Next I laid a weight of ten pounds gently (but thoroughly) on a bare glass cell for an hour, and it did not break. I short-circuited two cells by twisting the terminal wires firmly together, one in the brass case and the other without that cover; in one hour the bare cell showed a slight rise in temperature, but the wax which I wound around one end was still quite hard. The one in the brass cover showed no apparent change. Then I unwound the wires of each and coupled them together in series, and replaced them in a box for protection. In an hour they were both warm, the glass one especially (because of direct conduction). In three hours there was visible destruction of the silver bar, particularly in the track of the fine silver wrapping-wire; evident leakage showed at the outlet of the silver wire on the plaster cover; there was gas collected at the top of the pasty electrolyte. In six hours all these signs were multiplied, and then it being bedtime, I left the cells till morning, when the bare glass cell was found cracked and worn out. On removing the other from the brass cover, it was also worn out, but not broken. Twenty cells coated with wax and short-circuited, similarly were broken up in six hours, and the wax very much softened, but I did not perceive them to melt whilst looking at them, as Dr. Sangree hints his did. This number, of course, generated a powerful current, but it took the time indicated to wear the lot out; the glass was broken in one-third of the number only. What the actual temperature was during these tests I do not know, for I did not care to expose my thermometer

to the shock, and I was away from the box at the instant of fracture. It is, however, evident that twenty or more cells short-circuited together would melt the wax and destroy the glass. When wrapped in the wax a fall might break the glass if hard enough, but the wax could not melt unless exposed to a high heat—over one hundred and sixty Fahrenheit.

A cell within a circuit of one hundred ohms resistance worked for seventy nine hours and was still active; another through a resistance of five hundred is still in good shape, after two hundred and ten hours; other tests in progress (resistance of a thousand and twenty five hundred ohms) for now more than three hundred and eight hours have not been terminated—the cells are to wear out before reporting. This is enough to satisfy any unbiased man in medicine or any other matter wherein electricity is used; no other cell in existence, dry or wet, will do this amount of work, particularly in the so called "dry-cells." No wet cell on earth, whatever its character, will run half the time, and it steadily polarizes from the moment of starting till it falls to zero—the chloride of silver keeps its voltage up to the last kick, when it expires.

I saw a chloride battery fall into the trench at Fifteenth and Walnut streets on top of the conduit, some years ago—the distance being about ten feet—and it was uninjured. The criticism of Dr. Sangree as to the knife turning at the first cut is apropos, but inversely to his view; all other batteries turn at the first moment, growing less powerful, till they are useless in a very short time—usually less than one hour; the chloride of silver keeps on for six hundred or more hours with uniform pressure and quantity, and then takes a rest which is well-earned, assuredly. The cells alone then need renewal—all the other parts being as good as ever, but in all the other makes the whole business is good for nothing when the cells give out, because bichromate and other acid electrolytes are corrosive. Every doctor who uses electricity thoroughly knows this to his cost. I am surprised to hear that my friend, Dr. Newman, holds the opinion given by Dr. Sangree, for in the work which that eminent man has so well illustrated—that of curing the worst strictures by electricity—the essential is a steady and uniform current, and this we get absolutely with the chloride of silver cell, and with no other. The electropoion jumps frequently two to three ma. at a time, up and down, as the hydrogen leaves the cathodes, and this is very bad in cases demanding very mild handling. All the same, if Dr. Sangree is satisfied with this vicarious support, no one else is concerned in it. Several thousand owners hold contrary opinions.

It is perfectly true, as Dr. Sangree says, that much money has been uselessly expended on dry-cells; not one that I ever saw, aside from the chloride of silver, is worth a cent, and one gentleman who hastily endorsed a particular style has told me that he would give five hundred dollars to be able to withdraw his testimonial.

Any one with some little mechanical ability can renew these glass cells, so far as the elements go, and seal them pretty securely with several materials, as I have found by trying. Of course, we can't use the patented seals. I don't know whether the use of glass tubes is patented or not, but I should think that would not be the case. It is, however, more expensive to do this than to send to the makers. I have tried nitrate of silver bars with several electrolytes—starch and zinc sulphate; gelatine with glycerine and zinc sulphate; these gave fair results; many others can be used, for galvanism is easily developed, although not always cheaply or in a cleanly manner.

I have no interest at all in this style of cell, beyond knowing it to be the better of all extant for my use, and, although I have stock in some electrical ventures and certainties, I own none in medical manufacturing concerns, hence I am not biased in this way, anyhow. I say freely what I think about any or all makes, and solely in the interest of those who, like myself, want the best. The courtesy which the gentlemen of this company have shown me is, I believe, open to all who are interested in electrical matters if they are capable of appreciating facts, and what I have said, be it well or ill said, is written with respect for the opinion of all, and not with any desire to claim undue expertness, beyond that held by many workers in this branch of physical research.

I enclose specimen cells with and without the cover; one with the glass removed, in normally good order; another with glass broken away, showing the

effect of short-circuiting for two hours—it is totally destroyed as to anode, cathode electrolyte, and the entire cell, aside from its sealing.

Although not connected with this little friendly skirmish, I wish to correct a typographical error in the second sentence of the last paragraph of my article on Gynecology, in the issue of the 20th inst. The word "no" was omitted. The sentence should read: "It has now gotten to the point of asserting that *no* one has a right to use the sound or speculum, do a laparotomy (or, what is better for the ripper, not the patient, send for an expert in this business), and then you can see what is wrong, even if you can't cure it by the section."

PHILADELPHIA.

The Medical Digest.

TREATMENT OF APPARENT DEATHS FROM DROWNING.—Laborde (*Rev. Gen. de Med.*, July 20, 1892;) reports that in two cases of submersion in which the patients seemed to be dead, he used the following procedure, which he is in the habit of employing on the animals in his laboratory. It consists in seizing the tongue, pulling it out of the mouth, and making rhythmical traction on it. This is followed in the first place by reflex hiccough, then by spontaneous contractions of the diaphragm, and finally by re establishment of circulation and respiration. As an adjuvant to this procedure the application to the epigastrium of cloths soaked in very hot water, even at the risk of burning the skin, is found useful.

—*Brit. Med. Jour.*

SALINE ENEMATA IN ACUTE ANÆMIA.—P. T. Neustube (*Vratch*, No. 20, 1892,) recommends rectal injections of a physiological saline solution as a convenient, easy, harmless, and efficacious substitute for intravenous, intraperitoneal, or subcutaneous (see *Epitome*, May 21, 1892, par. 459), transfusion in cases of acute anæmia due to *post partum* hemorrhage. He dissolves a teaspoonful of common salt in a bottleful of tepid water, and injects the whole in the rectum, taking the usual precautions for preventing reflux. The author employed this simple procedure in five cases (three in hospital and five in private practice), every one of the women making good recovery. One of the cases was an abortion in a patient suffering from typhoid fever with diarrhœa. Contrary to the expectations of the author's colleagues, she retained the injected fluid perfectly well.—*Brit. Med. Jour.*

ATRESIA AFTER LABOR.—Petit (*Ann. de Gynec. et d'Obstet.*, May, 1892,) read this case at the recent meeting of the Congrès Français de Chirurgie. A woman was in labor which proved lingering. The practitioner found an obstacle in the vagina and divided it with a bistoury. The labor was completed by forceps. A few months later Petit examined the patient. About two and a half inches from the vulva a cicatricial stricture was found. It was cylindrical, with a narrow central canal. A probe passed up the canal entered four-fifths of an inch higher, into a wide cavity. The menses had become scanty, and after each period the patient felt increase of a weight in the hypogastrium. A large abdominal tumor was discovered by Petit. Hæmatometra was suspected and the canal in the stricture was dilated. Symptoms of peritonitis set in, and abdominal section was performed. A large sac was found, it was opened, and a litre (1.79 lb.) of pus escaped. The sac was cut away as far as possible, the remainder being sewn to the abdominal wound and drained. Later the stricture of the vagina was incised and dilated. These operations were performed many years ago. The patient is now in good health.—*Brit. Med. Jour.*

HYGIENE AND THE PHYSICIAN.—The great responsibility of the physician makes it necessary for him to protect himself, as far as possible, against failure in the practice of his profession; and, in order to do this, he acquaints himself with all the remedial agencies within his reach. He knows the standard remedies of the dispensatories, and the essential service of hygiene as an indispensable adjunct in the treatment of the sick. This paper, then, attempts to speak of hygiene from the standpoint of the physician rather than that of the professional health officer, and it is the aim only to treat the subject in a familiar way, leaving technicalities to those capable of writing learned theses in a scientific manner.

The meaning of the terms hygiene, health, and disease, as defined by the

authorities, is well-known, of course, by the practising physician. But the application of hygiene in the treatment of the sick is more than the simple meaning of the word. In respect to health itself, one of our most respectable authorities says that the state of the human person said to possess health is very difficult to explain, since no persons are known to possess it in the degree of perfection; and that if an examination was made of the bodies of the healthiest persons, it is doubtful if one among all of them could be found in which there did not exist one kind of lesion or another. The boundary line separating health from disease might be accurately described, if there were persons within reach who were up to the standard of what is credited as perfect health. But, as it is, these states called health and disease seem to merge into each other, and therefore we accommodate ourselves to existing conditions, and do the best we can.

Doing the best in his power for his patients, the doctor not only administers medicines, but at the same time employs all the advantages afforded by hygiene for their restoration to health—that is, that degree of exemption from disease they have been accustomed to enjoy. In doing this service for his patrons, possibly the more hygiene the better. The physician, however, in the practice of his profession, is not so much concerned in the art of preserving health, as he is in the art of conducting the sick back to their accustomed vigor by the employment of sanitary means and methods. In his treatment of the sick, the intelligent doctor knows that the degree of vital force in possession of his patient at the time he makes his diagnosis, furnishes reasonable grounds for a favorable or unfavorable prognosis, so that he does not depend alone on medicine, but wisely makes the best terms he can with nature, to aid his efforts and bring a safe recovery.

It is assumed that every practitioner of medicine has in view the welfare of his patrons, and that money is not alone the spur to his exertions. Money he must have; a reputation he must secure. But the desire to conduct his patients to a safe recovery is strongly fixed in the minds of physicians, as far as we know, and seems to be a ruling characteristic. And it may be safely said that all doctors feel more or less depressed when a patient dies. Reputation certainly has something to do with this; but an interest akin to the humane has more to do with it than reputation has. This statement is made as the result of observation. A case in hand illustrates it. Dr. S—— was called to see a lady living two miles in the country, who was supposed to be suffering from malarial fever of a mild type. But she grew worse, and one morning, shortly after the doctor was called and made his first visit, I met him on the street, when he told me of the unlooked-for death of his patient, and added that he was so much afflicted at the death of those whom he was treating that he felt like giving up the practice altogether. Being rather a hard man in respect to morals, I was somewhat surprised, and made a note of the incident, which led to the belief that, as far as known, this feeling is characteristic of the profession.

The doctor ought to be humane as well as skilful, of course. But it is essential that he know the conditions of health and hygiene that are held to be legitimate to the profession of medicine, for in the effort to conduct the sick through the period of prostration he will need to know the influence that his surroundings exert upon him. At the time, however, he will find that habit has more to do with health than has climate or heredity, occupation, or, possibly, even contagion. It is, therefore, well for the physician to acquaint himself with the manner of living of the patient he attempts to cure, so as to marshal his forces to overcome the resistance of bad habits. For the effect of physical strain and abuse of appetite through vicious and unhygienic living makes it really imperative that the doctor possess the facts, since these habits induce a second nature in a man that makes it difficult, even for the most skilful physician, to command success in his practice.

We all know that the doctor carries a great weight of responsibility, for the lives of his patients are put in his keeping, and the friends of the sick relieve themselves as soon as he arrives and surrender their entire management of case, looking expectantly for the treatment decided on to bring speedy convalescence. Now if the doctor's patient is a physical wreck, he ought to protect himself by knowing the fact, and, if need be, explaining matters to those most concerned.

It is held, then, as necessary to the success of the physician that he possess, as nearly as he can, a correct knowledge of the cause inducing the disease he is called to treat. And, besides that, he discriminates between the adverse influences of climate, water, air, etc., in respect to their effect upon health and the exhaustion uniformly consequent upon unhygienic personal habits, since it is quite apparent that the physical vices of the people break down the health far more than any one of these influences, or even all of them together, are likely to do.

Gymnasts and pugilists, from the effect of violent exertion and reckless living, are no exception to the rule. For these men, whom nature has endowed with superior muscular strength, are said, on the best of authority, to die before they reach old age, and often even in the very prime of life. Dr. Winship, the great American gymnast, evidently from overstrain, died while he was yet comparatively young. Charley Gallagher, a noted pugilist of this country, died of consumption at the age of thirty. Tom Sayers died of injuries received in a fight with John C. Heenan. Heenan himself died with consumption. Patsy Riordan, a man of almost perfect physique, died at the age of thirty-six, a physical and also a mental wreck. Bob Riddle died in the same way, the flesh even dropping from the bones of his hands as soon as the breath had left his body. Ben Hogan, himself at one time a pugilist of note, is said to be the authority for these ststements.

Indeed, the doctor is very seldom favored with the pleasure of treating a patient who has enjoyed perfect immunity from injuries brought on himself through unhygienic living up to the time he is called to take the case. This state of affairs seems to indicate the necessity of diagnosing the patient as well as the disease — a patient whose constitution was impaired before the development of disease. But, knowing this, he need not be discouraged. He can still do his best. To know how to treat a sick man who was well born, and who never afterward had an unhygienic habit, is one thing, and to conduct successfully the case of a broken-down man is another. Yet such is the recuperative power of the body that recovery from sickness may be looked for where the best sanitary methods are employed, with a judicious administration of medicines.

Again, it is known that by observing the rules by which health is restored and maintained, these have an important bearing on the cure of sick persons. And it is in this relation that hygiene becomes almost as important to the physician as it is to the patient, for the persistent violation of sanitary laws wears out the powers of resistance inhering in the vital force, aud disease follows the prostration. And no doctor would expect to dislodge the disease so caused but by restoring an enforcement of the violated laws. Indeed, every one, even among the laity, must have noted the very great change that has taken place in the past fifty years or less in the practice of medicine, in the diminished confidence in mere medication, and the corresponding increase in sanitary and hygienic measures, in the management of disease. The fathers in the profession were certainly as intellectual as their sons are, but perhaps not as minute in their observations, and certainly not as business like and practical as their sons.

With due respect to the past, the facts show that it was by no means uncommon, even since our first birthday was celebrated, to ignore the laws of health in the sick-room and in the methods employed in the treatment of the sick. In those unhappy days the fever-parched patient cried in vain for a cold drink of water. The luxury of fresh air was also denied him. The windows and doors of his room were kept closed to prevent its entrance. And there the poor wretch lay, day and night, breathing the tainted atmosphere, until Death, in his pity of him, took him from his misery, where his friends, in their cruel management, could not torture him any longer. But the world moves, and thanks to common sense, the profession progresses.

Speaking of sanitation and the sick-room gives occasion to speak of some cases in this line of thought. A twelve-year-old boy, the son of a village merchant, was treated for an ordinary attack of fever. Water was denied him. Doors and windows were kept closed. Boiled corn, on the cob, was laid around him in the bed in order to sweat him. All this, and yet the poor boy died; and the doctor made terms with the injured parents by assuring them that the disease was a very malignant type of fever, while, in fact, the trouble was not so much in the

fever itself, as it was in the very malignant way the doctor had of treating it.

Another case, but in respect to its management quite an opposite one: A boy in the country lay sick with paludal, or March fever. He was very low, so that his relatives scarcely hoped for his recovery. The doctor saw the lad, and noticed that the clothing he had on and the bedding on which he lay were almost rotten with filth. The order was issued at once for a thorough cleaning up in this respect. With this sanitary movement enforced, under appropriate medical treatment he began to recover, and was soon well.

Then a young woman, said to have typho-malarial fever, was seen. The room in which she lay was darkened. The bed was located in one corner of the room. The air was stagnant about her, and fetid with the exhalations from her diseased body. It was ordered that the light be admitted, window and door kept open, and the bed removed for better ventilation. This done, the disease became quite tractable, and in two weeks she was comparatively well.

At another time a middle-aged man, of full habit, sick with a high grade of fever, of bilious type, was seen. Time of year, August; thermometer at 96° in the shade. Patient suffering severely from intense heat. It was ordered that wet sheets be kept hanging in the room. Thermometer went down to 80°. Patient became comfortable, and soon began to recover.

Speaking of the impairment of the physical condition by the vices common even among men of robust make admits of reference being made to the drink habit. And no matter what its apologists have to say for it, the drinking of intoxicating liquors is proven by the work it does to be a senseless and pernicious habit. And the physician is well aware that the custom of the times is to cover the disgrace of drunkenness in case of death from that cause, by saying that the drunkard came to his death by heart-failure, apoplexy, or fatty degeneration of the liver. The doctor is expected, of course, being the family physician, to frame a falsehood to save the respectability of the family connection. But no physician can afford to put his own honor on the market for any sum offered by his patrons to hide the voluntary degradation of their friends.

Germain to this is another matter well known to physicians who are often consulted by parties interested. Advice is sought by a young man whose life has been "fast." He is, perhaps, twenty-six years of age. He is familiar with all the current vices, and is broken down by the drink habit and debauchery. He is rotten in morals and incurably diseased in body, and this beast of a man asks the doctor if it wouldn't be a good thing for him to straighten himself up and marry some healthy girl. Of course, it is eminently proper to advise the fellow to straighten himself up, but to advise him to marry a decent girl, a doctor would sooner advise a filthy leper to enter the circle of a healthy family. The doctor has, besides, quite a different class of cases, who consult him respecting the very delicate question of marriage, the party in quest of information being a young woman, as principal, with one or more female friends acting in her interest. The young woman is in the first stage of consumption. She wishes to know, through her friends, whether she would not enjoy increased bodily vigor, and an extension of life, as well, by marrying and becoming a mother. But the advice desired is not given by the judicious physician, for the reason that the offspring of a diseased mother is known to inherit less or more, the peculiar disabilities and defects of the parent that caused its being; and was there a court of equity for the benefit of children born of diseased parents—whether those parents were consumptive, syphilitic, or the offspring of a man in old age, or of one in the decay of senility, such parents would most justly be convicted and held guilty of inflicting wanton injuries entailed upon children whose life must always be one of pain and weakness. But then there is no such court, and there is no redress for children thus badly born; and the doctor must not and will not become a party to any such criminal proceedings.

But in recommending and employing for the benefit of his patients the best sanitary management, shall the doctor, therefore, advertise the sanitarium? We answer "No," for the reason that the sick well cared for do much better at home. Hereditary tendencies are made to cover a multitude of sins with the man of bad habits, but the doctor will not endorse this practice, either. He knows that what a man learns after he is born leads to the formation of his character, and that the

superior force of right culture and voluntary well doing will, under any circumstances, checkmate all the evil tendencies of heredity, provided the party in question is a sane man.

But as our paper is of sufficient length for the present purpose, we close by summing up what has been attempted here. Hygiene itself is the act of preserving health. Disease is deranged physiological action. The physician finds it to be a difficult and complex work to restore health, but in the employment of sanitary means it is comparatively easy to maintain it. Vital force is held to be in exact ratio to the chemical changes taking place in the body. This chemical action may be too rapid, too slow, or it may be perverted. The length and value of life depends on the maintenance of health, and that which concerns the physician in his treatment of the sick specially, is the fact that disease arising from violations of the laws of health is incurable as long as these violations continue.

In his original way of spelling, that is, of bad spelling, Josh Billings says: "If I was a doctor, and understood my business, I should doctor my patients and let the disease take care of itself. More folks are cured this way than any other." And so say we.

—G. F. Culmer, M.D., Odon, Ind., in *Lancet Clinic.*

Some Points in the Study of Uric Acid.—Physicians cannot study too closely the intricate problem of the phenomena of uric acid in the system. The London correspondent of the *Denver Medical Times* gives the following report, and comments upon Sir William Robert's Croonian Lectures, recently delivered upon the "Chemistry and Therapeutics of Uric Acid, Gravel and Gout:" He divides the morbid phenomena associated with uric acid into those having reference to gravel and calculus, and those having reference to gout. In the former, uric acid is thrown down in the free state from the urine, as concretions in the urinary channels; in the latter, uric acid is thrown down in a state of combination as sodium bi-urate, in the interior tissues of the body. In both cases the precipitated substance necessarily acts as a foreign body, and tends to cause inflammatory incidents and obstructions in the parts implicated. There are three orders of uric acid salts, for, in addition to the neutral urates and bi-urates which have been long recognized, there exists a third order, namely, the quadri-urates; these last exist normally in human urine and in the urine of birds and serpents, and when uric acid is brought into relation with the bodily fluids, with blood, lymph and synovia, it enters into solution in the first instance as a quadri-urate. The quadri-urates may therefore be regarded as being, in a special sense, the physiological salts of uric acid, and as constituting the only form in which uric acid subsists in the living body in the normal state. Uric acid thus exists in the urine in combination with the alkaline bases. In perfect health, these combinations maintain their integrity, not only while the urine is detained in the urinary channels, but even for some considerable time after it has been discharged. This, however, is not always the case. In certain contingencies these combinations are prematurely decomposed, their uric acid is set free and is precipitated from the urine in the crystalline form. In calculus subjects this event takes place in the kidneys or bladder, and gives rise to the incidents of gravel; in less urgent cases, the precipitation takes place soon after the urine is voided, and perfectly normal urines betray the same tendency. The chemical explanation of the spontaneous precipitation of uric acid in urine is as follows: The uric acid always subsists in the unchanged urine as a quadri-urate, dissolved in a watery solution containing a number of mineral salts, of which the most important, in regard to the point under discussion, are the alkaline phosphates; these regulate in the main, the reaction of the urine, and oscillate between the monometallic forms or superphosphates, which have an acid reaction, and the dimetallic forms which have an alkaline reaction. We have, therefore, in an acid urine, the quadri-urate existing in the presence of water and of superphosphates; these conditions ensure the complete liberation of the uric acid; the first step in the process is the splitting up of the quadri-urate by the action of the urine into free uric acid and bi urate. By this reaction half the uric acid is set free, but the bi-urate resulting from this reaction is immediately retransformed in the presence of superphosphates by a double decomposition into quadri-urate, and these alternating

reactions go on progressively till all the uric acid is set free. That precipitation of uric acid does not occur in the normal course till some time (twenty-four hours to seven days) after the urine has been voided, is due to the fact that the urine contains certain ingredients which greatly retard the water of it from breaking up the quadri-urates; the inhibitory agents are the urinary pigment, and the chlorides, phosphates and sulphates of potassium, sodium, ammonium, calcium and magnesium.

Poverty of the urine in saline matters is probably an influential factor in the disproportionate frequency of stone among the children of the poor, as compared with the children of the easier classes; on the other hand the well-known immunity enjoyed by sailors from stone and gravel depends probably on the great quantity of salt which seafaring men habitually consume with their food. Sir William Roberts considers that in the immense majority of cases of uric acid gravel in this country, the immediate determining cause is excessive acidity of the urine.

It is chemically impossible for uric acid to be deposited from an alkaline urine. A study of the normal oscillations of the urine at different periods of the day and night, leads to the inference that the liability to uric acid gravel rises to a dangerous intensity only during certain limited portions of the twenty-four hours. The character of the urine has been shown to be most affected by the digestion of food, by prolonged fasting and by sleep. Food increases its volume and depresses acidity; conversely, in prolonged fasting, and during the hours of sleep, which are also hours of fasting, the acidity of the urine reaches its highest point, and the flow of urine its lowest. Therefore, the period when there is most risk of precipitation in the kidneys is during the time of sleep, and especially in the early morning, during the two or three hours preceding breakfast. A study of these facts indicates that if we safeguard the night, the day may generally be left to take care of itself. In the milder cases a single full dose of the alkalizing agent, taken at bed time, suffices to prevent the recurrence of the colicky pains, and the discharge of uric acid concretions. For this purpose, 40-60 grains of citrate of potassium, dissolved in three or four ounces of water, is the best preparation to employ. In severer cases a second, but smaller dose should be taken, about the middle period of the hours of sleep. In extreme cases, it is necessary to administer it during the day for a short time, but each meal acts as a dose of an alkali and also as a diluent, and in both these ways operates as a protective against uric acid precipitation. Subjects of gravel should, therefore, be warned not to allow too long an interval to elapse between their meals.

MATTEISM: AN EXPOSURE—We reprint herewith, from the *British Medical Journal*, the salient points of the report made by G. W. Potter, M.D., Chairman of the Mattei Investigation Committee. This is a complete exposure of the "bottled electricity—green, yellow, and variously colored," put forth by a quack, Count Mattei, of Italy:

For my part, however, I strove to introduce a stipulation that the Matteists should at least tell us what their remedy consisted of before we proceeded to further investigation, but this stipulation was not accepted. As some of our medical brethren have a little misunderstood the position and intentions of the committee, it may be desirable to state that we entered upon our duties merely as a committee of observation, not of supervision or direction. We were asked, not to treat cases, but to see and admit cures in the making, exactly as we might have been asked to see and admit the reality of the miracles at Lourdes, or of the wonders said to be wrought at Bethshan. To this there could be no ethical objection; nor, so far as I can see, was it in any way expedient. On the contrary, it was, under the peculiar circumstances, highly expedient, as the result has convincingly shown.

At the outset, the Matteists expressed themselves willing to accept, as subjects of treatment, cases of *bona fide* cancer by whomsoever introduced, provided they were still in the "first or second stage." To this limitation the committee made no objection. But when it began to be necessary to put these protestations into practice, a spirit of caution, not to say of extreme timidity, laid hold of the Matteists. Patient after patient was sent in, but declined by the cancer curers on one pretext or another. So much was this the case, that Mr. Lawson Tait was several times on the point of making a premature exposure of what he considered discredi-

table tactics. Even Mr. Stead himself began to think that he might have been deceived. This unlooked for hesitancy was an early indication that in Matteism all is not gold that glitters, and that the Matteists themselves are very well aware of the fact.

The most cautious calculator may sooner or later find himself in a dilemma; and that was exactly the position in which the Matteists found themselves. Mr Stead, without at all intending it, had proved to be their most dangerous enemy. They were between Scylla and Charybdis. If they persisted in refusing every case sent in, Mr. Stead must expose them in the *Review of Reviews;* if they accepted cases which they could not cure, the believers in open or honorable methods of medicine, whose criticism the Matteists themselves had demanded with such well-simulated earnestness, would equally expose their failure to the light of day. Thus hemmed in on all sides, they were obliged to accept some cases for experiment; and, ultimately, they agreed to treat five patients out of a large number submitted to them—all women, all, with one doubtful exception, suffering from cancer of the breast, and all certified by competent surgeons, not members of the committee and not Matteists.

The committee appointed a graduate in arts and medicine of the University of Cambridge to act as their paid registrar. His duties were to watch the cases in detail, from week to week, and to make periodical reports. The members of the committee themselves also, in turn, regularly inspected the cases and noted their progress. It may be desirable here to state that the registrar, whose name I am not at liberty to mention, proved to be a most discreet, conscientious, and intelligent officer, and I much regret that he does not permit me to claim for him that honorable recognition of his important service to truth and good morals which every right-thinking medical man will be anxious to accord. To him it is largely due that the committee has been able to expose what they believe to be a worthless and impudent system of quackery.

Some of the patients accepted by the Matteists for treatment were at first located for a time in St. Saviour's Hospital, Osnaburgh street, but this arrangement proving impracticable, they were dealt with as out patients at one of the Matteist depots. The committee, recognizing that they were observing an experiment in the utility of which they had no *a priori* faith, and which was being tried on five human beings, felt that they were bound to explain to the patients at the outset exactly how matters stood. The five women were therefore separately and solemnly informed that not one of the members of the committee or their registrar had any faith whatever in the value of the treatment which the Matteists were employing, and that the wisest thing for every one of them to do would be to seek aid at a hospital, or privately at the hands of a competent surgeon. This advice notwithstanding, all the patients elected to undergo the Mattei treatment.

The five cases were under observation for exactly a year. That period was quite long enough for definite changes of a favorable or unfavorable character to manifest themselves in all or most of the cases. At first the Matteists professed great confidence of favorable results. A few months after the commencement of the experiment Sir Morell Mackenzie unhappily became very ill, and the meetings of the committee were interrupted and not recommenced until after his death. The registrar, however, saw the patients every week, and I, being resident in London, was kept thoroughly conversant with the course of events. On the death of Sir Morell Mackenzie it seemed necessary either to strengthen the committee by the addition of other medical men resident in London or to dissolve it, as Mr. Lawson Tait lived at too great a distance from town to take any personal part in the work. Mr. H. A. Reeves, F.R.C.S.E., and Mr. John Hopkins, F.R.C.S., both consented to join the committee and to see the investigation carried to a conclusion.

Thus strengthened by competent practitioners resident in London, we felt that a thorough and conclusive inquiry could be conducted to completion. A visiting rota was agreed upon, and each member of the committee promised to attend weekly in turn, along with the registrar, at the depot, to inspect the cases. All this was faithfully carried out. When the Matteists discovered that they were dealing with men who intended to give them as much latitude as they pleased, but who were also minded to see what use they would make of it, they took fresh

and more obvious alarm. They wrote to the committee, through Mr Stead, representing that the treatment of the five cases was likely to be very prolonged and to cause much inconvenience to the members of the committee, as well as to delay indefinitely the publication of the report which was so anxiously looked for. They, therefore, proposed that, as they had several old cases on hand which they professed to have cured previously, the committee should see those ancient cases and publish their report upon them.

Mr. Stead expressed himself as thoroughly ashamed of his champions. He, unfortunately for himself, had been fully convinced that Matteism was an inspiration, and that Mattei and all his followers, but especially his medical followers, were loyal lovers of truth. Though the members of the committee sympathized deeply with the editor of the *Review of Reviews*, it is hardly necessary to state that they did not see their way to accept and report upon ancient cases exclusively vouched for by the testimony of the interested "cancer curers," and of which they had no opportunity of verifying the diagnosis at the outset or watching the progress. This was the second attempt made by the hardly pressed Matteists to escape from the plight into which they had brought themselves.

It now became obvious to all the parties concerned that the Matteists must either cure their cases or ignominiously give up the contest. But the cases could not be cured by any such means as were employed. On the contrary, the cancerous growths all continued to progress exactly as if no treatment whatever had been used. Some developed slowly, others more rapidly; but one, which had presented an unbroken surface at the outset, very soon became deeply ulcerated and excavated, and even the Matteists themselves were obliged to admit that "it seemed to be getting worse." Then happened an apparently irrelevant circumstance which the cancer curers seized upon, as a drowning man catches at a straw. One of the smaller medical papers, not knowing the real facts of the case, called in question the expediency of the inquiry. The members of the committee then publicly explained the *status quo*. Whereupon the Matteists wrote to Mr. Stead, pretending that one of the conditions of the inquiry had been violated; and that, therefore, they declined to continue the treatment of the cases under the observation of the committee. Mr. Stead explained to them that they were under an absolute misapprehension; that no condition had been violated; that what had happened was that the committee had made a rule for its own guidance to the effect that nothing was to be published relating to the cases, without the authority of the committee; that the Matteists were not members of the committee and, therefore, had nothing to do with its rules; that, moreover, even the rule made by the committee for its own regulation had not been violated, inasmuch as nothing had been published relating to the facts of the inquiry, but only an explanation of the skeptical attitude of mind in which the committee had entered upon its work had been given to the medical profession; and that, moreover, the Matteists had known of that attitude of mind from the very first, and had professed that it was the one mental attitude of all others which they themselves had wished the committee to hold.

But Mr. Stead's protests were all in vain. In vain he told the Matteists that they had invited inquiry; in vain he urged that to convince believers was a superfluous task; what was necessary was to convince unbelievers; and that the unbelievers were ready and waiting to be convinced. In vain he urged upon them that if the five cases were to be ultimately really cured, even unbelievers could not deny the actual and material facts; and that, moreover, if they did, he (Mr. Stead) was there to convict them of falsehood, and to denounce them before the whole professional and non-professional worlds. In spite of these almost pathetic protests and adjurations, the Matteists positively and repeatedly declined to continue the treatment of the cases under the observation of the committee in any way whatever. This was the third attempt on the part of the Matteists to escape from the investigation they had directly courted. This final attempt at escape was successful. The Matteists took to flight, and ran, figuratively speaking, as fast and as far as their legs could carry them. Is any comment demanded upon facts like these?

What are the medical aspects of the Mattei treatment? There are no medical aspects of any kind. Matteism, in the deliberate judgment of the committee,

consists exclusively of vulgar, unadulterated, unredeemed quackery. Mr. Stokes analyzed the "electricities," the potions of the Matteists, and found them to yield no other reaction than that of plain distilled water. The results of administering these substances to patients entirely coincided with the results of chemical analysis. Water is the potent magician which, when taken in unquestioning faith, makes some of the deluded victims of Matteism feel that they are relieved of their pains. Even the poor creature whose cancerous growth is ulcerated and excavated, and whom the Matteists themselves admit to be "worse," persists in declaring herself improved, and pathetically anticipates the day of her perfect cure.

There is nothing more to be said. The story is as old as the world. The savage trusts to his amulet; the civilized man, both in the upper and lower circles, submits himself with childish, if not childlike, simplicity to the pretences of the quack. It is a strange world; but, such as it is, open and honorable medicine has to live and work in it, and must make the best it can of so wonderfully varied an environment.

The Etiology and Prevention of Dental Decay.—"Our only hope is that dentists may disseminate a knowledge of how best to combat these degenerative tendencies, and so enable us to resist the nervous strain and overcrowding which are credited with producing these evils, and unless they do so they will have failed to justify their elevation to professional rank."

The above sentence from your annotation on "Dental Medicine" in the *Medical Press* of July 6, is calculated to give a somewhat wrong impression as to the state of our knowledge regarding the etiology of dental caries. The subject in the dental profession is now a thrice told tale, but as it still remains very largely an unknown territory to the medical world, I will, with your permission, reiterate some of the more salient facts. But first I would personally express the obligation which I, in common with the whole dental profession, feel under to Sir J. Crichton Browne. He is one of the few physicians who have taken pains to master all essential matters concerning the etiology of dental caries, and to impress upon the medical world and the public the importance of tooth decay as a factor in influencing health.

It is impossible to name any disease of which more complete knowledge exists than of dental caries. For this knowledge we are most indebted to dental surgeons; although pathologists like, for instance, the late Professor Wedl, of Vienna, have done much to elucidate the whole subject and to establish correct opinions.

As will be presently seen evolutionary and hereditary forces are the prime motors in causation of caries, and if the dental profession is to be reproached for their impotence to control those forces, the world in general, and the scientific world in particular, must certainly share the reproach.

The cardinal facts to be grasped in understanding the nature of dental caries is, that it is entirely the effect of external causes in which true pathological processes—reaction in physiological elements—are entirely absent. Caries is due to the solvent effect of acids. These acids are mainly generated by fermentation in organic *débris* lodged upon the teeth. When the process of solution is once started—it in most instances starts in a patch of enamel, the seat of an inherent defect—the accumulation of *débris* on the roughened surface accelerates the process of solution. As soon as the enamel is perforated and the dentine reached, microorganisms proliferate along the tubules, and finding pabulum in the fibrils and organic basis of the tissue render still more rapid the course of the disease. These facts as to the nature of tooth decay are demonstrable, but I cannot now occupy your space with their full discussion. I may, however, summarize the main facts upon which determination of the nature of dental caries is based.

1. The anatomical characters of the teeth and the physiological qualities of enamel and dentine render it certain that these tissues, once fully calcified, are not the seat of physiological activity, and it is therefore impossible that they can be the seat of pathological action.

2. Except innate defects, which are extremely common, no morbid conditions are ever discoverable in the enamel or dentine save such as may be due to external causes.

3. Dentine and enamel would depend for their physiological activity—

vascular and nervous supply—upon the dental pulp; but caries in teeth deprived of their pulps, commonly done by operation, is identical with the disease in teeth with living pulps.

4. The presence of the destructive agents, acids and organisms, is in every instance verifiable, and their action upon the tissues can be readily discerned and followed.

5. Congestion and inflammatory phenomena in contiguous vascular connections are not necessary accompaniments of dental caries; inflammation of the dental pulp and periosteum are sequelæ to destruction of the hard tissues, but take no part in causation or progress of decay.

6. The predisposing causes of decay, the laws which govern its incidence and its rate of progress; and the macroscopical and microscopical appearances are all precisely the same in human teeth worn on plates as artificial substitutes and in living teeth.

Lastly. Decay identical in every respect with caries can be produced artificially out of the mouth by subjecting teeth to the influence of agents—organic matter moisture, and micro-organisms—at body temperature.

The artificial production of caries may be considered a crucial experiment by which the last shreds of doubt as to the essential character of the malady must be destroyed. Dr. Miller was the first to perform this experiment successfully, he was followed some time ago by myself and Mr. Pound. Sections of artificial caries are indistinguishable beneath the microscope from natural decay, and present all the phenomena, including the invariable presence of micro-organisms within the tubules and all the characteristic tissue changes.

The prime factor in the etiology of dental decay is formed of inherent structural defects and weaknesses in the tissues, and especially in enamel. Innate defects may affect the whole body of the tooth, or may be confined to certain spots in the enamel and dentine. The durability of the dental tissues varies infinitely—in one individual the teeth withstand the extremest hard usage combined with neglect; in another they show traces of disease within the earliest years of childhood, and are destroyed sooner or later, even in spite of active treatment.

Enamel and dentine of such delicate teeth, examined microscopically, are found to present well-marked evidences of imperfect formation. The enamel, instead of being a densely hard homogeneous mass, is comparatively soft, owing to imperfect calcification, and porous in consequence of incomplete coalescence of its formative elements. It retains a fibrous character. The fibers are imperfectly blended; their transverse striæ are clearly evident, and they are often penetrated at their centers by tubes or small cavities. At parts the fibrous character may be altogether lost, the tissue consisting of an imperfectly united granular mass.

The dentine exhibits throughout its structure, and especially immediately beneath the enamel, patches of defective tissue similar in character to the granular layer, which in well-formed teeth exists only at the point of juncture with the cement. In the spaces within this defective tissue—sometimes called interglobular spaces—the tubes end, or they may run on and terminate in dilated extremities within the substance of the enamel.

Besides these structural imperfections another class of defects are equally common, namely, pits and fissures in the enamel and dentine. These vary in extent between minute cracks visible only under the microscope, and cavities visible to the naked eye. Sometimes defective enamel is completely honeycombed.

It does not by any means always happen that all these structural defects exist together in one tooth. Their degree and character vary infinitely. In teeth of otherwise good organization one or two pits or fissures, or small patches of defective tissue, are often found; whilst in teeth of generally inferior structure there are often to be discovered portions of still lower formation.

It is easy to perceive how these defects furnish lodgment for acid-forming substances, and render the teeth easily acted upon and destroyed. The fact that these innate defects vary infinitely in extent and character in teeth of different individuals, must especially be borne in mind, as it in great measure accounts for the extreme variation in the apparent susceptibility of individuals to the attacks of caries, and for the equally marked variation in the rate of progress of the disease in different instances. When enamel of the worst quality clothes dentine of equally

bad formation, caries once started runs a rapid course; on the other hand, the progress of decay will often be delayed when dentine of first-rate quality forms the bulk of a tooth, the enamel of which is ill made.

It is the exception to meet with an individual of a civilized race with every tooth perfect in structure; to find a set of teeth of otherwise good organization in which one or two pits or fissures or patches of ill made enamel are not discoverable, hence the fact that caries is so universally spread, few individuals passing through life without an attack in one or more teeth. The numbers among the population at present whose teeth are of the most defective structure is vast, but it is by no means proved that these numbers have been on the increase in later generations. To prove this would have needed observations on a large scale, and in the absence, until recent times of an educated dental profession, no such observations were attempted.

It can hardly be questioned that the evident inferiority of the whole apparatus of mastication—teeth, jaws and muscles—has been brought about in civilized races by the process of evolution.

It has been conclusively shown by Prof. Flower that there is gradual decrease in size of the jaws and teeth, through savage and primitive races to those of the highest civilized type, and there seems no reason to doubt, although it has not been demonstrated, that the teeth are of relatively inferior structure; but in this respect the dental development of the different civilized peoples seems to vary considerably[1].

Ill made dental tissues are often hereditary, and structural characteristics may often follow those of one parent only. Nothing is more common than to find in members of the same family teeth of one general type and quality, or teeth presenting, in exactly the same situations, flaws or patches of inferior formation. The effects upon the teeth of hereditary syphilis and also of stomatitis occurring during the progress of enamel calcification, have been sufficiently proved; and although the typical teeth of Hutchinson—the significance of which is unquestionable—are present in only a small proportion of undoubtedly syphilitic children, their occasional occurrence clearly shows the power of hereditary disease to influence the development of enamel and denture. An intimate connection between dental mal development and any other diathesis besides the syphilitic, cannot be demonstrated fully, yet there are some of these constitutional conditions with which badly-made teeth seem more or less associated. In this matter I am recording the results of my own observation alone. My experience goes to show that imperfect dental tissues are found in the majority of cases of scrofula.

With rickets I have found inherently defective teeth. I can in no way associate faulty tooth development either with rheumatic or gouty constitution. Indeed, with the latter both the jaws and teeth are often of unusually massive and solid character. In view of our limited knowledge of the causation of the degeneracy of enamel and dentine, what general measures can be suggested likely to lead to improvement in the quality of the tissues, and to aid in the prevention of dental caries. Such a question can be answered only in general form. Whatever tends to improve the physical development of a race should cause a relative improvement in the structural qualities of the teeth. The observance of the well-known general laws of health, we may be sure, will tend to produce good teeth in the race, if not in the individual, and among these laws we must insert one inculcating the use of articles of diet that shall give due exercise to the muscles of mastication, and prevent them, and the bones to which they are attached, from wasting.

It may next be asked, Can we by treatment influence beneficially the developing teeth of a fœtus in utero through a mother? In view of the fact that enamel once calcified is physiologically unalterable, the answer must be that little reliance can be placed upon the treatment specifically directed to that end, and we must depend mainly upon measures for the amelioration of the mother's general health, and the eradication of any definite morbid constitutional taint.

[1] Prof. Flower shows, as a result of examination and measurement of many thousands of skulls, that there is a gradual diminution in the size of the teeth, from the anthropoid apes through the lower races of man to the European. He constructed a dental index, and in this index the average size of the teeth of the gorilla being represented by 50.8, the Tasmanian by 47.5, and other savage races holding intermediate positions; the European stands at 40.5.

To show that defective teeth might occasionally result from deficient supply of the necessary pabulum through the mother, several cogent facts have been brought forward. It has been pointed out that in a pregnant woman the union of a fracture is slow, the inference being that the lime salts are required for the formation of the bones of the fœtus, and this is borne out by the fact that osteophytes and bony thickenings, sometimes present in the early months of gestation, become absorbed as pregnancy advances, and bone begins to form in the fœtus. In the presence of these facts, a rule may be established that in every case of dyscrasia or cachexia during pregnancy, and particularly where there is a tendency to atrophy and bony wasting, there should be administered suitable dietary, together with the preparations of lime and phosphorus to be found in the Pharmacopœia.

The exteriors of the crowns of all the temporary teeth from caries of which children suffer so much, are fully formed at birth; these teeth can, therefore, be influenced only through the mother. By this time the first permanent molars and the permanent incisors and canines are so far advanced in development that it is open to doubt whether treatment can have any effect upon the enamel. It is difficult to believe that treatment could influence cases in which a strong hereditary influence proceeding from the father gives a bias to dental development. A mother with good dental tissues will often bear children with defective teeth, having the closest resemblance in structure and form to those of the father, who may be perfectly healthy, and in whom this may be the sole physical defect.

When the child is born, syphilis and specific diseases will receive their appropriate treatment, whilst the well known rules of hygiene are enforced for the improvement of the general health. We are ignorant of the actual causation of defective enamel. It cannot be always due to lack of lime salts, or the whole skeleton would in every case be equally defective with the teeth. But as uncertainty exists it may be better to err on the right side—especially as the error would be harmless—and enforce the rule, that in every case in which ill-made tooth tissues are likely to appear, an attempt by diet and therapeutics should be made to supply to the developing tissues the mineral constituents of which they may stand in need. This rule should, of course, especially be enforced in those diseases, such as rickets, in which the whole skeleton is ill-constructed. There is, of course, no difficulty in administering lime to an infant from birth.

To structural defects as a predisposing cause must be added a second; this is made up of the multitude of diseases accompanied by vitiation of the buccal secretions, or which tend to encourage formation of acid and accumulation of products of decomposition about the teeth.

It is impossible, particularly when both causes are present, to determine in any case the exact share which inherently weak enamel and vitiation of the secretions severally take in causation of caries, and when discussing the association of ill-made dental tissues with certain diatheses, it must, therefore, not be forgotten that some of these diatheses have as a common constant accompaniment vitiations of the secretions of the mouth. Thus one type of scrofulous subject—that with coarse features, muddy complexion, and long thick upper lip—has usually a chronic condition of congested buccal mucous membrane with secretion of acid mucus. Again, rickets is often preceded and attended by a virulent form of acid dyspepsia. In this way the prevalence of caries is to be accounted for among certain individuals or portions of the community whose physique and general health in other respects are not to a corresponding degree inferior, and whose dental tissues are not evidently of the worst structure. For example, the constant presence of dyspeptic troubles in some classes of factory operatives is enough to account for the rapid tooth decay from which they suffer. Dyspepsia due to sedentary habits and improper dietary—superabundance of coarse food and alcohol—is so common in some of these communities that it is regarded as a matter of course, and endured as one of those evils from which there is no escape.

The broad facts must be kept in view that without acid, without a septic condition of the secretions of the mouth, caries is impossible, and that acid capable of dissolving enamel—and of more rapidly dissolving enamel in proportion as the tissue is soft and ill-made—is always being formed in greater or less quantity in every mouth in which perfect cleanliness does not uniformly exist.

In combating this cause of caries, the patient's general health must first be considered. Probably every lapse from a perfect standard will be accompanied by a proportionate vitiation of the secretions of the mouth. But even with perfect health and perfect dental tissues, caries may appear if organic *débris* be allowed to remain and decompose in contact with the teeth. The first thing, therefore, in the prevention of caries is to insure cleanliness by the use of tooth-brush with proper tooth-powder. A tooth-pick, properly employed, is important. The use of those of quill or wood only should be allowed; metal may scratch and break the enamel. They should be used at night, to clear away remains of food between the teeth before they receive their final brushing. Where the teeth are crowded, and are of delicate structure, the use of fine silk thread, passed between the teeth and rubbed to and fro, supersedes the tooth-pick.

In fevers and other diseases in which the patient is either too feeble or too listless to clean his teeth for himself, this should be done by an attendant. In such cases, and in all those in which great vitiation of the secretion is present, such as the zymotic fevers and the dyscrasia of pregnancy, extra means should be adopted, by use of antiseptic lotions, with which the teeth should be thoroughly brushed, as well as the mouth rinsed, to prevent putrefaction and fermentation in the deposits which form upon the teeth. Thorough cleansing of the teeth in this way will often suffice to prevent toothache, which in certain conditions—particularly during pregnancy—is clearly due to the irritation of carious cavities by the products of decomposition.

The third predisposing cause of caries is crowding and irregularity of the teeth, due to smallness and malformation of the maxillæ. These conditions are the characteristics of the civilized jaw, and their causation must be ascribed to the evolutionary changes already mentioned. Crowded and irregular teeth present nooks, cranies and narrow interstices, and make certain the prolonged lodgment of particles in contact with dental surfaces. It is in this way that caries is very often started in teeth of defective structure; and it will almost invariably be found, if caries begins where the tissues are of good quality, that it attacks the teeth in those positions where particles of food become wedged during mastication.

In the treatment of crowding and irregularity of the teeth with a view to the prevention of caries, the most universally beneficial measure is the extraction of two or more of the most defective teeth from each jaw during the progress of second dentition. This should never be done before the second molars are in place—about the twelfth year. The effect of the operation is to cause all the teeth gradually to spread equally apart, and this goes on in crowded jaws until the space formerly occupied by the largest molars becomes obliterated.—Sewell, *Med. Press.*

Abdominal Massage.—E. E. Ivanoff (*Vratch*, No. 20, 1892,) suggests a modification of Sahli's method of abdominal massage. Instead of a cannon ball, he uses a hollow wooden or celloidin globe filled with shot, which is poured into the cavity through a hole furnished with a stopper. The quantity of shot should vary according to the patient's age, averaging about 1 lb. for a child under 2 years, 2 lbs. for 2 to 4 years old, 3 lbs. for other children, and up to 4 or 5 lbs. for adults. The author used the method successfully in a series of cases of very obstinate chronic constipation in children, in whom prolonged treatment with laxatives and enemata had utterly failed. The *technique* is exceedingly simple; the ball is rolled up and down along the course of the large bowel for two or three minutes, being pushed with a gentle touch of the palm of the hand. The procedure should be repeated twice daily. The author thinks this form of massage will prove beneficial, not only in atonic constipation, but in (1) intestinal stricture following dysentery, typhoid fever, etc.; (2) chronic infiltration about the womb and its appendages; (3) atony of the bladder; (4) neuralgias of limbs. In comparison with Sahli's metal globes, the wooden or celloidin balls are said to offer the following advantages: (*a*) They do not cause any unpleasant sensations of chill; (*b*) their weight can be easily varied according to the circumstances of the case; (*c*) they are very cheap.—*Brit. Med. Jour.*

CHRONIC GOUT.—The following was a favorite of the late Dr. A. B. Garrod:

℞.—Ext. colchici acet.,
Ext. rhei,
Ext. aloes socot.....āā vj.
Ext. belladonnæ..... gr. j.
M.—Et. ft., pil. No. vi.
Sig. Take one at night, twice a week.

—*Med. Review.*

News and Miscellany.

DR. W. THORNTON PARKER has removed to 2220 Wabash avenue, Chicago, Ill., from Salem, Mass.

WEEKLY Report of Interments in Philadelphia, from August 13 to August 20, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess		1	Inanition		18
Alcoholism	4		Influenza	1	
Apoplexy	11		Inflam'n bladder	1	
Bright's disease	10	1	" brain	1	7
Cancer	6		" bronchi	4	
Carbuncle	2		" kidneys	2	1
Casualties	4	3	" larynx		1
Congestion of the brain		7	" liver	1	
Congestion of the lungs	4	2	" lungs	8	2
Cholera infantum		49	" pericard'm	1	
" morbus	2		" peritone'm	1	1
Cirrhosis of the liver	2		" pleura		1
Consumption of the lungs	45	5	" s. & bowels	5	5
Consumption of the bowels	1		" heart	1	
Colic		2	Insanity	2	
Convulsions	1	14	Marasmus	1	32
Collapse of the lungs		2	Measles		1
Cyanosis		6	Obstruction of the bowels	1	1
Debility	5	3	Old age	11	
Diabetes	1		Paralysis	2	
Diarrhœa	5	4	Rheumatism	1	
Diphtheria		7	Septicæmia	1	
Disease of the heart	14	3	Sore mouth		1
" " liver	1		Softening of the brain	2	
" " spine	1		Suicide	7	
Drowned	3	2	Sunstroke	8	1
Dropsy	1	3	Syphilis		1
Dysentery	5	2	Tabes mesenterica		3
Epilepsy	1	1	Teething		2
Erysipelas	1		Tumor	2	
Fever, malarial	1		Ulceration of the stomach	1	
" puerperal	1		Uræmia	5	1
" typhoid	4	1	Whooping-cough		7
Hemorrhage		1	Total	207	206
Homicide	1	1			

OF THE FOREGOING THERE WERE:

Under 1 year	135	From 50 to 60	34
From 1 to 2	34	" 60 to 70	26
" 2 to 5	13	" 70 to 80	30
" 5 to 10	11	" 80 to 90	7
" 10 to 15	2	" 90 to 100	1
" 15 to 20	11	" 100 to 110	1
" 20 to 30	40		
" 30 to 40	45	Total	413
" 40 to 50	23		

Males, 218; females, 195; boys, 107; girls, 99.
The number of deaths, compared with corresponding week of 1891 and of last week, was as follows:
Week ending August 22, 1891, was 429.
Week ending August 13, 1892, was 504.
By order of the Board of Health,
MOSES VEALE,
Health Officer.
Attest:
J. V. P. TURNER,
Chief Registration Clerk.

ARMY, NAVY AND MARINE HOSPITAL SERVICE.

Changes in the Medical Corps of the U. S. Navy for the week ending August 20, 1892.

ASHBRIDGE, RICHARD, Passed Assistant-Surgeon. Detached from Navy Yard, New York, and wait orders.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from August 7 to 22, 1892.

Leave of absence for one month, to take effect about September 1, 1892, is granted Captain Adrian S. Polhemus, Assistant-Surgeon, U. S. Army.

The leave of absence granted Colonel Charles Page, Assistant-Surgeon General, U. S. Army, is extended one month.

The extension of the leave of absence granted Captain William C. Gorgas, Assistant-Surgeon, U. S. Army, is further extended twenty days.

Leave of absence for twenty-one days, to take effect upon the completion of the bond of Captain Harry O. Perley, Assistant-Surgeon, U. S. Army, is granted Colonel Charles T. Alexander, Assistant-Surgeon General, U. S. Army.

The leave of absence on surgeon's certificate of disability granted Captain Marcus E. Taylor, Assistant-Surgeon, U. S. Army, is extended four months on surgeon's certificate of disability.

Leave of absence for four months is granted Major Charles Smart, Surgeon, U. S. Army.

Captain Richard W. Johnson, Assistant-Surgeon, U. S. Army, is relieved from duty at Fort Bayard, New Mexico, and ordered to Fort Bowie, Arizona Territory, for duty at that station, relieving First Lieutenant Philip G. Wales, Assistant-Surgeon.

Lieutenant Wales, on being relieved by Captain Johnson, is ordered to Fort Bayard, New Mexico, for duty at that station.

Captain Walter Reed, Assistant-Surgeon, U. S. Army, upon the arrival of First Lieutenant Charles F. Mason, Assistant-Surgeon, at Fort Snelling, Minnesota, will be relieved from duty at that station, and will report in person to the commanding general, Department of Dakota, for duty as Attending Surgeon and Examiner of Recruits at the headquarters of that department.

First Lieutenant Paul Shillock, Assistant-Surgeon, U. S. Army, now on temporary duty at San Carlos, Arizona Territory, is relieved from duty at Fort Grant, Arizona Territory, and assigned to permanent duty at San Carlos, Arizona Territory, relieving First Lieutenant Nathan S. Jarvis, Assistant-Surgeon.

Lieutenant Jarvis, on being relieved by Lieutenant Shillock, is ordered to Fort Apache, Arizona Territory, for duty, relieving Captain Louis M. Mans, Assistant-Surgeon.

Captain Mans, on being relieved by Lieutenant Jarvis, is ordered to Whipple Barracks, Arizona Territory, for duty.

Lieutenant-Colonel Charles R. Greenleaf, Deputy Surgeon-General, now at Montpelier, Vermont, will proceed to Plattsburg Barracks, N. Y, on business connected with the Medical Department, and on completion thereof will return to Montpelier.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service for the three months ending August 20, 1892.

BAILHACHE, P. H., Surgeon. Granted leave of absence for fourteen days. May 25, 1892.

PURVIANCE, GEORGE, Surgeon. Granted leave of absence for seven days. August 9, 1892.

VANSANT, JOHN, Surgeon. Granted leave of absence for thirty days. August 13, 1892.

AUSTIN, H. W., Surgeon. Granted leave of absence for thirty days. June 21, 1892.

STONER, G. W., Surgeon. To proceed to Port Huron, Sault Ste. Marie, Saginaw, Marquette, Mich.; Duluth, Minn.; and Superior, Wis., as inspector. July 11, 1892.

MEAD, F. W., Surgeon. Granted leave of absence for thirty days. July 11, 1892.

CARTER, H R., Surgeon. To proceed to Chicago, Ill., as inspector of unserviceable property. August 16, 1892.

WASDIN, EUGENE, Passed Assistant-Surgeon. Granted leave of absence for twenty-eight days. July 21, 1892.

WHITE, J. H., Passed Assistant-Surgeon. Granted leave of absence for thirty days. August 13, 1892.

CARRINGTON, P. M., Passed Assistant-Surgeon. Granted leave of absence for twenty-seven days. August 13, 1892.

MCINTOSH, W. P., Passed Assistant-Surgeon. Granted leave of absence for thirty days. July 8, 1892.

MAGRUDER, G. M., Passed Assistant Surgeon. Granted leave of absence for seven days. August 18, 1892.

WOODWARD, R. M., Passed Assistant-Surgeon. Granted leave of absence for twenty-five days. August 1, 1892.

STONER, J. B., Passed Assistant-Surgeon. Granted leave of absence for twenty-six days. August 13, 1892.

CONDICT, A. W., Assistant-Surgeon. Granted leave of absence for twenty-six days. July 21, 1892.

HUSSEY, S. H., Assistant-Surgeon. To proceed to Galveston, Texas, for temporary duty. August 11, 1892.

WERTENBAKER, C. P., Assistant-Surgeon. To proceed to Pittsburg, Pa., for temporary duty. August 9, 1892.

PERRY, J. C., Assistant-Surgeon. To proceed to Charleston, S. C., for temporary duty. July 19, 1892.

SMITH, A. C., Assistant-Surgeon. Granted leave of absence for twenty-eight days. August 13, 1892.

ROSENAN, M. J., Assistant-Surgeon. To proceed to Cairo, Ill., for temporary duty. July 27, 1892

COFER, L. E., Assistant-Surgeon. To proceed to Norfolk, Va., for temporary duty. June 10, 1892. Granted leave of absence for twenty-three days. August 6, 1892.

EAGER, J. M., Assistant-Surgeon. To proceed to Evansville, Ind., for temporary duty. August 11, 1892.

NYDEGGER, J. A., Assistant-Surgeon. Assigned to temporary duty at Baltimore, Md. July 6, 1892.

STEWART, W. J. S., Assistant-Surgeon. To proceed to New York for temporary duty. July 6, 1892. To proceed to Wilmington, N. C., for temporary duty. July 19, 1892. To proceed to Savannah, Ga., for temporary duty. August 9, 1892.

PROMOTIONS.

STONER, J. B. Commissioned as Passed Assistant-Surgeon. June 30, 1892.

GUITERAS, G. M. Commissioned as Passed Assistant-Surgeon. July 27, 1892.

APPOINTMENTS.

NYDEGGER, JAMES A., M.D., of Maryland. Commissioned as Assistant-Surgeon. July 1, 1892.

STEWART, WILLIAM J. S., M.D., of Pennsylvania. Commissioned as Assistant-Surgeon. June 30, 1892.

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Cascara Aromatic is sweet in taste (which children and women especially appreciate) instead of being bitter, as is the ordinary fluid extract, powerful (its dose is only ¼ to 1 fluidrachm) yet gentle in effect, and in addition does not gripe.

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Vol. XXV. No. 10. PHILADELPHIA, SEPTEMBER, 3, 1892. Whole No. 730.

PAGE

ORIGINAL ARTICLES:

FARADIZATION OF CHEST-WALLS AFTER OPERATION FOR SCIRRHUS. By W. F. Waugh, A.M., M.D. 267

EPIDEMIC DYSENTERY. By Herman D. Marcus, M.D. - - - - - - - - - - - - - - - - - 268

DOSIMETRIC MATERIA MEDICA. By Chas. Everett Warren, M.D. - - - - - - - - - - - - - - - 270

EDITORIAL:

EDITORIAL RESIGNATION - - - - - - - - - - - 273

OPIUM HABIT - - - - - - - - - - - - - - - - 273

TRIAL OF ALICE MITCHEL - - - - - - - - - - 273

ANNOTATION:

A Peripatetic College - - - - - - - - - - - - - 274

LETTERS TO THE EDITOR:

Private Correspondence. *Strock and Forrest* - - - 274

Retained Placenta. *Nolan* - - - - - - - - - - - 274

Diagnosis and Treatment Wanted, *Hurd* - - - - 274

Penetrating Wound of Knee-Joint. *Cuffman* - - 275

Frontal Neuralgia and Dysmenorrhea. *Coates* - - 275

THE MEDICAL DIGEST:

Gonorrhœa (*Eclectic Med. Jour.*)—Cancer of the Rectum (*Cripps*)—The Lessened Vitality of Females at the Time of Puberty and Adolescence (*Crichton Browne*)—Treatment of Spinal Abscess (*Cheyne*)—Enlarged Prostate (*Harrison*)—Ulcers of the Leg (*Gramshaw*)—Summary of the Opium Discussion at the Calcutta Medical Society (*Indian Medical Gazette*)—Solar Cautery in Lupus Exedens (*Thayer*)—Anæmia and Mountain Air (*Lancet*)—Treatment of Diphtheria (*Rademaker*)

PAGE

—Sulfonal in the Cramps of Fractured Limbs, and Reflex Spasms from Other Causes (*Andrews*)—Anatomy of the Hymen (*Cullingworth*) - 276–283

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—Some Disorders Provoked by Adenoid Vegetations in Young Children (*Barbon*)—The Influence of Costume in the Production of Floating Kidney in Women (*Karangi*)—"In Re Brown Sequard." (*Pochl*)—Asphyxia by Submersion (*Brouardel*)—The Therapeutic Use of Syrup of Chloride of Iron (*Ved*)—Technique for the Rapid Staining of B. Tuberculosis in Specimens Preserved in Muller's Fluid (*Letulle*)—Transmissibility of Tuberculosis by Bed Bugs (*Dewees*)—The "Tuberculosis" Congress in 1893 (*La Review Medicale*)—Treatment of Burns in Children (*Wertheimber*)—Bromide of Ethyl as an Anæsthetic (*Barbon*)—On the Narcosis Produced by the Bromide of Ethyl (*Gilis*) 283–287

GERMAN NOTES. *Marcus*—Therapie of Trional and Tetronal (*Schaefer*)—Chloroform in Typhoid Fever (*Werner*)—Hemorrhoids (*L'Union Méd.*)—Iodoformum Deodoratum (*Pharmaz. Zeitung*)—Diuretin (*Pharmaz. Centralhalle*)—Guajakol in Phthisis (*Oliva*)—Cholera Infantum (*Sonnenberger*)—Diarrhœa in Children (*Sympson*)—Diarrhœa, Nervous (*Nothnagel*)—A Case of Cyanide of Potassium Poisoning (*Wichman*)—Poisoning With Hydrocyanic Acid (*Kobert*) - - - - - 287–289

MEDICAL NEWS AND MISCELLANY - - - - 289

SPECIAL ARTICLE:

TREATMENT OF ELECTRICAL INJURY FROM COMMERCIAL CURRENTS. By W. R. D. Blackwood, M.D. - - - - - - - - - - - - - - - - - 292

WORLD'S FAIR NOTES - - - - - - - - - - - - 294

Original Articles.

FARADIZATION OF CHEST-WALLS AFTER OPERATION FOR SCIRRHUS.

By W. F. WAUGH, A.M., M.D.

A LADY had had both breasts amputated for scirrhus. On one side a good deal of the skin had been removed, as well as the muscles and other tissues, down to the ribs. The wound had healed by granulation; but the nutrition of the skin and the cicatrix was poor, and there was a tendency to breaking down of the scar tissue whenever her strength was depressed. On the other side, the upper inch of the scar was indurated in a way that seemed ominous to the attending physician. On the back, near the inferior angle of the left scapula, was a hard gland about as large as a grain of corn. On the neck, the upper cervical glands were enlarged to the same size, on both sides, and one middle cervical gland on each side could be felt, as large as a kernel of wheat. The lady complained of pains in the chest so severe as to prevent her sleeping. She was thin and haggard, and a victim of cancerophobia; had no appetite, and little digestive power. The second tumor had developed after the removal of the first. The operations were in February and May of the present year. The case came into my hands on July 7. Assuredly this was a case calculated to cause uneasiness. The cervical glands had no direct connection with the breasts, however, and I felt justified in doubting their cancerous nature. Sending for my fine Kidder faradic battery, I began to treat the chest with a mild current, using the positive pole. Whenever I found a tender spot the current was turned down until no pain was felt, and this was continued for some minutes. The scars were also treated in the same manner. The séances were never over fifteen minutes, and in that time the whole front of the

chest and the neck were treated. The most tender spot was at the apex-beat of the heart, an inch or more below the cicatrix. Here a very gentle current could alone be borne, and that from a Gaiffe pocket battery was altogether unbearable, even in its mildest form. I have never seen the superiority of the Kidder rheotome more clearly demonstrated. The results of treatment after two months are as follows:

1. The pains were relieved at once, and every time the application was made.

2. The nutrition was improved; the cicatrices became healthier, and where they had broken healed over at once.

3. The cicatrices became paler, losing the red, angry flush perceptible at my first examination.

4. The induration in the right cicatrix has almost completely disappeared.

5. The cervical glands show no perceptible alteration at the end of two months, except that they are no longer the seat of pain.

6. The general health and the nervous condition of the patient have greatly improved.

Had the indurations been cancerous, in two months there would have been a perceptible increase in their size. Without in any way claiming for faradization any part in dissipating cancerous growths, I wish specially to call attention to the improvement in the nutrition of the tissues, weakened by the destruction of their nutrient vessels, and to suggest that this innutrition was the cause of the pains. If this be accepted, the great relief following the use of faradization is also noteworthy.

EPIDEMIC DYSENTERY.

By HERMAN D. MARCUS, M.D.,
Resident Physician at the Philadelphia Hospital.

DYSENTERY, when appearing in its epidemic character, is one of the diseases in which little treatment is probably better than a continuous application of drugs, valueless to the patient and tending to destroy the patient's vitality.

In my experience with epidemic dysentery at the Philadelphia Hospital, I had occasion to notice the effect of a number of drugs and combinations of drugs, and I have seen that no preparations that I had tried have had the least effect in checking or aborting the disease. The disease, once taking its foothold, will run its course despite all treatment, although by a judicious application of some drugs we may avert unhappy complications, or, if such have arisen, we are able to combat them more readily.

The dangerous feature of dysentery lies probably in its character as a depleting disease and its great number of complications.

Dysentery, when epidemic, is generally ushered in with slight fever, rapid, but weak pulse, and quick prostration.

The stools are characteristic, consisting of blood, brownish mucus, and pus, in which, at times, in some cases, patches of intestinal mucous membrane are present.

The tongue becomes dry, with marked red tip and edges, and a brown coating.

Anorexia, nausea, and vomiting are next observed, and the stools, still bloody in their character, increase in number.

The patient becomes rapidly emaciated, and has a peculiar, anxious, and worn expression. It is about this time that we may look for complications.

I had occasion to observe patients who, developing pulmonary lesions, would become critical in less than twenty-four hours, others again would show marked symptoms of uræmia, while others who had some previous cardiac lesion would rapidly collapse.

The exhaustion due to the stools, so depressing in their character, may very easily be medicated, but once complicated with some pulmonary or cardiac lesions, and the patient's chances become *nil.*

During my experience with dysentery, I found that one drug especially seemed to have some peculiar specific influence on the course of the disease, not that it was truly specific in its action, but it seemed to bridge the patient over more safely.

I speak of sulpho-carbolate of zinc.

I have found that whenever I employed the sulpho-carbolate, the number of stools decreased rapidly, the temperature became soon normal, or nearly so, and the patient seemed to become brighter.

Although not all cases were equally successful, the ratio of recoveries when employing this drug, compares very favorably with any other drugs employed.

Complications when arising in patients who were under this treatment, did not seem to become as dangerous as in patients not under this treatment.

I have used the sulpho-carbolate only in asthenic cases, and I can heartily recommend it, not as a drug which can check the dysentery, but as a drug which will ameliorate the conditions present.

I have given sulpho-carbolate of zinc in doses of from 2 to 5 grains every two to three hours, and continued its use until the stools became greenish.

I then used an astringent mixture, which I found was of great benefit in decreasing the intensity of the diarrhœa following the green stools. The mixture consists of—

℞.—Bismuthi subnitratis..... ʒiv.
Creosoti..... ♏xxiv.
Tr. opii camph..... fʒxij.
Mist cretæ..... fʒiv.
Aq. menth. pip.....q. s. fʒvi.
M.—S. fʒss every four hours.

Whenever the bloody stools became too numerous a pill consisting of

℞.—Plumbi acet..... gr. ij.
Pulv. opii.....
Camphoræ.....āā gr. ss.

every three hours until twelve were taken, and then t. i. d., was found to reduce the number of stools to two or three daily.

Uræmia, when complicating dysentery, was treated by giving pilocarpine gr. ⅓, and sweating the patient for from one to two hours. Uræmic convulsions were treated by hypodermic injections of morphine combined with the sweating. To stimulate the heart, tincture of digitalis was freely used as well as strychnine. Nitroglycerine, 1 drop of a 1 per cent. solution every hour, until the face became flushed, was used in a few cases with marked results.

Pulmonary complications were found to be the most resisting to treatment, and whenever such entered into the phase of the disease, the patient became critical and ultimately died, despite all exertions to save his life. Flushing the lower bowels with a creoline solution was tried in a number of cases, but I could not see any improvement under such treatment.

Dysentery cannot be checked or aborted, it will run its course, the stools will gradually become green, and finally change to a simple diarrhœa, despite all treatment.

Our aim must be to support our patient, and a nourishing diet and early stimulation must be employed.

Beef broths, boiled or peptonized milk, white of eggs or some beef preparation, must be given at regular intervals.

Feeding every two or three hours, with occasional stimulation, will do a great deal towards saving our patient's life. Under no circumstances should anything but a liquid diet, bland but nourishing, be given.

The beef preparation which I have found most useful in very weak debilitated persons was Bovinine. It is, without doubt, unequaled in its purity, and may be given with impunity.

It is my habit to give from 10 to 30 drops of bovinine in about one teaspoonful of milk every half hour, when the patient is very much emaciated and debilitated, while in patients less weak I have given ʒi to ʒij every three to four hours, using as a vehicle either milk, wine, whiskey, or water.

The effect of such a treatment is at times wonderful, and I have seen cases, which seemingly unable to recover from the marked prostration, regained their strength rapidly under the influence of bovinine. When using this preparation attention must be paid to the fact that the patient must not be nauseated. If the patient takes the bovinine unwillingly, objecting to its taste, our aim must be to disguise the preparation properly, generally a little wine or whiskey added will be found sufficient.

But we will encounter patients so sensitive that even then they will object. Then we must use enemas, a good formula being :

℞.—Bovinine..... ..... fʒij.
Milk..... fʒiij.
Sig. Every four hours.

The disadvantage of employing bovinine as an enema lies in the condition of the lower bowels. They being in a stage of severe inflammation they are not quite in a position to assimilate food thrown in. Still, by using such a large amount of bovinine at one time, sufficient is retained to act successfully.

But wherever it can be given by the mouth it is undoubtedly preferable, and will show the most wonderful results.

Regarding stimulation, my experience has been that it is well to start early with small, though regularly given doses of whiskey or brandy, such as fʒi to fʒij every two hours. Overstimulation must be carefully avoided, as it will greatly endanger our patients. From a hygienic standpoint it is very important to thor-

oughly disinfect every stool, and keep everything surrounding the patient clean.

DOSIMETRIC MATERIA MEDICA.

By CHAS. EVERETT WARREN, M.D.,

UNION PARK, BOSTON, MASS.

[CONTINUED FROM LAST WEEK.]

Hydrastine.—A succedaneum for quinine. It increases the intestinal and mucous secretion and is purgative in doses of several centigrammes. Upon the stomach it has an action analogous to that of quassine. It is, therefore, at the same time a gastric tonic and a tonic laxative. Hence it is indicated in constipation as well as in diarrhœa, when the one or the other is due to gastro intestinal atonicity, as in chronic gastritis due to chronic alcoholism. In doses of one, four to eight granules a day.

Hyosciamine.—The best of sedative drugs, because it is not irritating. Conjointly with aconite it quiets the brain in insomnia, but it is especially efficacious in spasms of all kinds, irreducible hernia, especially strangulated, where it aids the surgeon by relaxing the constrictions of the viscera; when spasm is concurrent with paralysis this alkaloid should be conjoined with strychnine. This combination is an excellent remedy against mal de mer, gastralgia, cystalgia, etc., in a word, in all lesions of the visceral cavities. One granule every half hour.

Hypophosphites, (*Lime, Soda and Potash*) are organic alternatives in rachitis, osteomalacia, consumption, etc., in doses of a dozen a day, three or four at a time. They may be given singly or collectively as the system demands potash, soda or lime, and are often advantageously combined with strychnine or brucine.

Iodoform contains a very large percentage, as high as 90 per cent., of iodine. It is a diffusible stimulant and sedative. Indicated in irritation of the primary passages. It is, properly speaking, an anæsthetic, but it never suppresses the secretions and on the contrary restores them to their natural state, when in any way changed, as in the last period of phthisis pulmonaris. The dose is from twelve to twenty granules per day. Also indicated in bad breath. Its action is mild and not corrosive. In lymphatic affections it is useful to incite crasis.

Iridin is diuretic in small doses of two to five granules a day, but purgative and emetic in larger doses. One granule every half hour is indicated as a counter stimulant in pneumonia, acute bronchitis, etc. Its action is analagous to that of veratrine, and, like it, is often associated with aconitine.

Iron Arseniate.—Indicated in anæmia, chlorosis, sanguinous dyscrasias, herpes, scrofula, cancer, syphilis, etc. Four to twelve granules a day.

Iron Lactate.—An excellent digestive and hæmatic remedy. Several granules to be given at meals.

Jalapine.—This does not have the drastic properties of jalap, but is a simple excitant of the intestine, like elaterine, to which it is analagous in quality, indication and dose.

Juglandine.—A vermifuge and depurative. As a vermifuge it should be combined with kousseine, picrotoxin, santonin or calomel. As a depurative it should be combined with mercurials and iodides in syphilis; with the hypophosphites, iodoform and iron, in scrofula; in doses of ten to twelve granules a day.

Kermes is an expectorant in doses of six to eight granules a day, two at a time.

Kousseine.—A vermifuge, not as violent in its action as kousso. It is powerless against tænia. It has not the dangers of santonine, replacing it, to advantage, in many cases, especially in young children. It should be given in doses of two granules every hour until the desired effect is produced, and then a dessertspoonful of castor oil is to be given.

Leptandrine.—A tonic, regulating the nerves of the hepatic and intestinal centers. It re-establishes the normal biliary and intestinal secretions, and is indicated in chronic diarrhœa, in bilious affections, typhoid fever, cholera infantum, etc., in doses of from two to five granules every hour, alone, or in combination with rhubarb or podophyllin.

Lobeline.—Emetic, expectorant, diaphoretic and antispasmodic. Indicated in pneumonia, croup, epilepsy, hysteria, tetanus, etc.; one granule every quarter or half hour in acute cases; six to eight daily in chronic.

Lycopine.—Narcotic and astringent. Indicated in spasmodic cough, hemoptysis, phthisis, pulmonaris, pulmonary catarrh, etc.

Manganese Arseniate.—This sometimes replaces the arseniate of iron to advantage, or it may be conjoined with it in anæmia to reconstitute the blood. It is best to associate the two in the same doses, and always progressively.

Mercury Biniodide.—Indicated in syphilis and secondary accidents therefrom; in doses of four to eight granules a day, until discoloration of the skin or disappearance of the plaques. More active than the protoiodide, a better eliminant, and less liable to induce mercurialism.

Mercury Protoiodide.—A mild preparation of mercury, not inducing salivation; of use in primary syphilis, to favor the resolution of indurations, in doses of ten granules a day.

Morphine Hydriodate.—The iodides are noted for their solubility, and are especially advantageous in diatheses. The hydriodate of morphine is especially useful in scrofulous inflammation, noticeably, that of the eye, with photophobia, used in conjunction with hyosciamine. One granule of each every half hour to sedation.

Morphine Hydrobromate.—Of the same qualities as hydrobromate of cicutine, and indicated conjointly with it.

Morphine Hydrochlorate.—An excellent and almost instantaneous calmative. Indicated in acute pain, especially that preventing sleep; in neuralgia, otitis and all inflammations of fibrous membranes. Four granules, with a potion of chloroform, may induce insensibility without loss of consciousness, so-called analgesia, a condition less dangerous than total anæsthesia. Inflammation being the daughter and mother of pain, it is essential to check this morbific element as speedily as possible. In painful operations this drug may be given in four to five granule doses, followed by chloral in a potion, repeated, if necessary.

Narceine has the same qualities as codeine, with an accessory stimulant action, indicating its exhibition in cases of torpor; two granules every half hour during the day, or four granules at night.

Pelleterine Tannate is an anthelmintic and powerful tænifuge. Its dosimetric use, ten to twenty granules at a time, every ten minutes, associated with laxative granules, castor oil or neutral sulphate of magnesia, avoids the vertigo and threatened syncope which often occur in the use of massive doses. Its massive dose of twenty centimeters is not followed by a purgative until two hours after its ingestion. Dosimetrically taken every ten minutes, ten tubes would be absorbed in two hours, the equivalent of a dose, in the aggregate, of ten centimeters, usually sufficient to accomplish the desired purpose to be immediately followed by neutral sulphate of magnesia, a teaspoonful in a glass of water.

Pepsin.—A digestive ferment, reinforcing the gastric juice and supplying its fermentative deficiencies, to be given in doses of ten granules at each meal.

Picrotoxine.—A vermifuge, useful to the clonic convulsions due to helminthiases; also indicated in hysterical epilepsy, in vesanies, etc., to stimulate the action of the intestine, four to six granules a day.

Pilocarpine Nitrate.—A sialagogue and sudorific, greatly increasing the secretion from all glands, not only the salivary and sudorific, but the mammary, hepatic, pancreatic and mucous glands of the bronchial and pulmonary system. Indicated in the pharyngeal dryness produced by atropine and its congeners, in chronic and pseudomembranous bronchitis, in dry dermatoses, in agalaxia, achalia and fatty or chylous diarrhœa.

It is extremely efficacious in pleurisy with effusion favoring resorption by sudoral hypercrinia. It acts in the same way in idiopathic ascites and anasarca, especially in those morbid states resulting from a chilling and consequent suppression of cutaneous transpiration. It has been claimed to be oxytocic, but ergotine and strychnine are superior. The doses are progressive to the effect and should always be associated with strychnine.

Piperine possesses the same qualities as cubebine, and is indicated in conjunction with, or as an alternative for, that drug.

Potash Arseniate strengthens the muscular system. Indicated in convalescence, associated with arseniate of iron; in partial or general progressive muscular atrophies, conjoined with arseniate of strychnine four to eight granules a day.

Podophyllin.—A valuable purgative in obstinate constipation. One or two granules to be taken at night, followed in the morning by neutral sulphate of magnesia.

Quassine is a gastric stimulant to digestion, acting upon the digestive juices, and also inciting peristaltic action in doses of three to four granules at meals. It is

especially valuable in dyspepsia and want of appetite.

Quinine Arseniate—A valuable combination in paludal fevers, superior to the sulphate, especially when conjoined with strychnine (arseniate or sulphate). The antimiasmatic *par excellence*, it is the sovereign remedy in infectious and typhoid affections. One granule every half hour to the amount of ten to twenty granules in the twenty-four hours in acute cases. Eight to twelve granules a day, two or four at a time, in paludal cachexias, associated with arseniate of iron, caffeine, etc.

Quinine Hydrobromate is an excellent febrifuge, especially in irritation of the spinal cord. The indications are the same as for the hydro-ferro cyanite.

Quinine Hydro-ferro-cyanite.—By the combination of iron and hydrocyanic acid, the action of the quinine is so greatly increased that as large a quantity of this preparation is not required as of other preparations of quinine. This removes the danger of inducing an artificial (quinine) fever, an accident which the Hahnemanians have long used as a favorite argument against Alopaths. It would be in error, however, to imagine that this salt of quinine acts like quinine alone. It has an essential chemical difference. It may be given in doses of six granules at a time, repeated every hour during the apyrexic period up to the period of access, which, by the way, seldom occurs under this treatment. The drug is also indicated in all periodical diseases, notably neuralgia, in this case being combined to advantage with hydriodate of morphine.

Quinine Sulphate.—Of this universally-known drug there is little to say. Care is necessary to avoid massive doses which may, and often do, induce an artificial gastritis. Strychnine doubles the strength as measured by effect, so that a much smaller dose induces the required effect.

Salicylates (*Ammonia*, *Iron*, *Lithia*, *Quinine*, *Soda*).—Excellent remedies in miasmatic or zymotic affections, acting upon the blood and secretions in doses of eight to ten granules a day.

Santonin.—A vermifuge, specific against ascarides lumbricoides; employed alone it is often effective, and is therefore better associated with calomel, kousseine, jugiandine, or tannate of pelleterin.

Scillitine is an excellent modifier of the respiratory and urinary mucous membrane. A substitute for digitaline. It is indicated in bronchitis (period of expectoration), in pneumonia, in asthma, and chronic diarrhœa. Eight to ten granules a day.

Soda Arseniate has all the indications of arsenious acid (q. v.), but is milder in its action, and better endured by the stomach. Indicated in enlargement of the liver and engorgement of the portal vein and the herpetic diathesis. Two to eight granules a day, two at a time.

Strychnine Arseniate.—Indicated in the initial period of typhoidal maladies, pyrexias and inflammations. In nervous insufficiency it should be combined with hyosciamine, especially where there is a spasmodic disturbance of the normal physiological equilibrium, as in asthma, dysphagia, dysuria, physometra, etc.; one granule every half hour in acute affections, and one or two every hour in chronic cases.

Strychnine Hypophosphite.—An excellent modifier of the nutrition. Indicated in rachitis, osteomalacia and chloro-anæmia, to check palpitation and dyspnoea. Two granules every half hour, or six to eight daily.

Strychnine Sulphate.—Same properties as the arseniate, but slightly less energetic. Indicated like the arseniate in the onset and course of pyrexias, as a vital incitant, and in rebellious, spasmodic lesions of the hollow organs, as well as in paralysis, as an excitant of contractility; associated with hyosciamine, it is recommended in sea-sickness.

Valerianates (*Iron*, *Quinine*, *Zinc*).—In nervous fevers, chloro-anæmia, choreiform, convulsions, etc., ten to twelve granules a day.

Veratrine.—This has a marked contra-stimulant effect, replacing tartar-emetic in pneumonia, acute rheumatism, neuralgia, etc., concurrently with aconitine. It is also useful in chronic exanthemata, eczema and ecthyma. One granule every half hour in the acute form, four to six a day in chronic forms of disease.

Zinc Cyanide.—This is indicated in neuralgia, especially the gastric type; in choreiform convulsions conjointly with strychnine, four to eight granules a day of each.

Zinc Phosphite.—A preparation efficacious in chronic convulsions, hysterical or choreiform, in doses of eight to ten a day.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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PHILADELPHIA, September 3, 1892.

IN resigning the editorial care of THE TIMES AND REGISTER, after this number, back into the hands of the editor, upon his welcome return from his summer sojourn, I wish to express my sense of obligation to the readers for aid rendered, and especially to Dr. Mary A. Dixon-Jones, of Brooklyn; Dr. Thomas H. Manley, of New York; Dr. E. W. Bing, of Chester, Pa., and Dr. Herman D. Marcus, Dr. Blackwood and Dr. Sangree, of Philadelphia.

JOHN J. TAYLOR.

THE discussion concerning the opium habit, by the members of the Calcutta Medical Society, will doubtless occasion some surprise. It must be remembered, however, that the experience of these men, though much more extensive than that of any practitioners in America or Europe, is principally among natives, Chinese and Hindoos. And in dealing with subject races, the question of the trouble caused by them is apt to assume greater prominence than that of individual enterprise. If the native be "quiet and inoffensive," he is looked upon with approbation, even if his faculties be benumbed with opium; while an unusual display of enterprise or independence would occasion rather an uncomfortable sensation. But, even with this discounting, the opinions of the Society are so widely variant from those generally held, that a revision of the grounds on which the use of opium is condemned would be advisable, especially as it is morally certain that the condemnation would be more emphatically decreed. The Anglo-Saxon has no need of opium, nor of alcohol, hashish, or any other of the resorts of weakly and degenerated races.

THE trial of Alice Mitchell for the murder of Freda Ward, her Lesbian paramour, resulted in acquittal on the ground of insanity. This was to have been expected, and the verdict appears to be generally approved by public sentiment. But the lesson of this case appears to us to have been lost. Aberrant impulses are best treated by bringing the affected functions or organs into proper exercise. Choreic muscles are brought under control by well executed gymnastic exercise. The sensual passions, whose unbridled energies lead to such deplorable practice, are controlled by confining them within proper channels. In fact, Discipline is the remedy for many, very many, of the mental, moral and physical ills of humanity. This alleged sexual pervert, Alice Mitchell, should have been safely married in her early youth; and the chances are vastly against her ever having fallen into the ways that led to degeneration of her nervous tissues, insanity and murder. As one of Tennyson's characters in *The Princess* puts it: "A lusty brace of twins would cure her of her folly."

The old family physician would have advised the proper course, when his experienced eye caught the first evidence of erotic tendencies; but he is now obsolete.

A NEW remedy for hysteria is called divorcin. We have known divorcing prove promptly curative.

Annotation.

A PERIPATETIC COLLEGE.

ACCORDING to the Hot Springs *Medical Journal*, that important medical center has enjoyed the distinction of having in its midst a medical college-on-wheels. The Texas Health College was incorporated by "Drs." Orrin Robertson, W. F. Shipp, W. T. Fisher, H. A. McNeil and Wm. A. Whittenberg, all "M. D.s." Of these erudite gentlemen, Polk's Register for 1890 contains the name of the first alone; and he is marked with a star, indicating his coy refusal to reply when asked to name the college graduating him. His terms for a diploma seem very high, but the qualifications make up for this by being very low. He requires the applicant to sign his name to a list of questions, to which the "Doctor" obligingly supplies the answers. The applicant pays $1.50, and receives his diploma, conferring the degree of M.D. Among the new members of our profession inducted by Robertson at Hot Springs, were a "farmer and sport," a bell-boy and an "electro-masseur." At last accounts the college had started for St. Louis, where it is understood there is generally a long-felt want for a few more medical colleges.

Letters to the Editor.

[Asking the pardon of the authors for publishing private editorial correspondence, we wish to give our readers the following samples of many congratulatory letters.]

AS a subscriber and reader of your excellent journal, I desire to express the gratification that I, perhaps in common with all your readers, feel when I take it up in its improved and now convenient form. This step is but in line with that progressive medical journalism that has given us the special numbers, which are really little books upon the topics of which they treat.

Your special department of French translations is also a feature that deserves commendation. Dr. Bing is doing a good work in epitomizing, and informing us of, the latest advances made in French therapeutical circles. It is impossible for American readers to keep informed of current foreign medical progress, unless it is placed before them in the way you are doing, as they have not access to the journals, and could not read them, perhaps, if they had. DANIEL STROCK, M.D.

CAMDEN, N. J.

YOURS of 20th just to hand. You are always welcome, always interesting. I cannot help thanking you for calling attention, this week, to the barbarous pronunciation of the word "Gynecology," which is so general. It is distressing to see how little the generality of our profession know, not only of Latin and Greek, but of their own mother tongue, and it is to be hoped that the efforts being made to advance medical education will result in exacting a thorough preliminary literary, as well as scientific education, from every candidate for the degree of M.D.

JOHN FORREST, M.D.

CHARLESTON, S. C.

RETAINED PLACENTA.

A FEW days ago I was called to remove a retained placenta resulting from a five months fœtus. The os was especially rigid, and while satisfied that there were no adhesions, the imprisonment of the placenta was evidently solid. Some time ago I had great trouble with a similar condition, the difference being that the chord was snapped and it was a full term.

After giving a full opiate, I directed a strong and steady stream of hot water into the uterus. This continued at least twelve to fifteen minutes, when, gaining a little *point d'appui*, I commenced the rolling-in process described by Lusk, and had much satisfaction in removing the dangerous sequel. What is striking in those cases is the difficulty of being sure the placenta is there; except the characteristic roughened margins, there is little to guard the diagnosis.

W. J. NOLAN, M.D.

EMMETSBURG, IOWA.

WILL you please give diagnosis and treatment of the following case: Man, aged thirty-three years; married six years; has suffered at varying intervals during the last year from disagreeable feelings in right arm and right leg, and sometimes the right ear feels as if it was filled with cotton. At one time these symptoms came on suddenly, followed in two days with severe pain and lameness

along the course of sciatic nerve of right leg. The next day he had a temperature of 102°, and felt very sick and weak for two or three days. There is always a considerable soreness of muscles, and some pain which shoots around over left side at times, but it is always much more severe on the right side. The feelings are described as drawing, and sometimes tingling in hand or hollow of foot, and sometimes the bone of one finger seems to ache for a minute or two. This may affect either hand. Two years ago he had bracho-humeral neuralgia, which lasted nearly a week. This was on left side. There are always tender spots over ribs on left side. JAS. T. HURD.

GALETON, PA.

[The symptoms point to disease of the cerebral cortex on the left side, of considerable extent, threatening hemiplegic paralysis. If there be syphilis, it should be treated; if not, counter-irritation, and a course of iodide of iron, with attention to the digestion, avoidance of excitement and of over-exertion comprise our best remedies, poor as they are. The neuralgias mentioned probably indicate a neurotic constitution, and this will require a careful up-building with quinine, strychnine, arsenic, etc.—W. F. W.]

PENETRATING WOUND OF KNEE-JOINT.

I HAVE a patient who cut himself on the inner side of the knee with an adze about three weeks ago, which resulted in synovitis, and later suppuration in the joint. There is a fistulous opening from the joint through the wound, through which the pus readily passes on making pressure upon the joint. There is no disease of the bone. The man is thirty-eight years of age and has previously enjoyed good health. Since suppuration commenced I have injected peroxide of hydrogen into the joint twice a day for the last three or four days, and to-day I injected an ounce of a 10 per cent. emulsion of iodoform in glycerine. If there is a better plan of treatment, will you please suggest it? What would be your prognosis in this case?

I am wellpleased with the special numbers of THE TIMES AND REGISTER. It is just what the busy practitioner needs.

J. H. CUFFMAN, M.D.

DALARK, ARK.

[I would wash out the joint with peroxide solution, repeated as often as pus showed itself; using one part to eight of Marchand's solution, and gradually increasing the strength until the full strength is used, unless the suppuration stops sooner. The leg should first be rendered aseptic by washing with solution of chlorinated soda, one to eight parts of water. Immediately after this washing the peroxide should be used, and an antiseptic dressing applied at once, to prevent re-infection of the joint. The room, house and surroundings should be put in the best hygienic condition, the patient well fed, and the leg put in an apparatus to keep it immovable.

—W. F. WAUGH.]

FRONTAL NEURALGIA AND DYSMENORRHEA.

A GIRL, nearly sixteen years old, applied to me to day for relief from a headache. It is frontal, and has been almost constant for a week or two. She has been subject to such attacks for three years, dating from measles. The pain is becoming more extended and the paroxysms prolonged. The pain is felt over both brows, and is relieved by firm pressure with the hand. She also complains of chilly sensations over her arms and shoulders at irregular times, but not every day. She began menstruating at the age of twelve years, the menses recurring every two or three weeks, with considerable pain in the hypogastrium for two days before and a half a day after the flow begins. The flow continues for a full week, and there is some lucorrhœa in the intervals, but no special backache. The hands and feet are often hot; the appetite variable, often poor. Temperature normal; pulse 89 at the time of her visit. She has a bitter taste in the mornings, water brash frequently. The bowels are regular. Since the attack of measles, her eyes have given trouble, being painful and the sight impaired. She has been fitted with glasses, changed several times, with little benefit.

Your special on "Summer Complaint" has been worth more to me than a year's subscription. Your own particular article helped me grandly in three cases of cholera infantum within ten days.

I have to-day recovered from a severe attack of summer complaint myself,

stopped in twenty-four hours; thanks, principally, to sulpho carbolate of zinc. It is my sheet anchor for bowel trouble.

TRUMAN COATES, M.D.

RUSSELVILLE, PA.

[There is evident here a condition of general nervous debility, dating from the measles, and this should receive attention first, before local treatment is instituted. Give the girl a course of iron in large doses—quinine, arsenic and strychnine in small doses. The water brash indicates the necessity of regulating the diet, and in spite of her assurance that the bowels are regular, I would add a little aloes (gr. $\frac{1}{10}$) to the dose. For the headache, examine eyes, nose and ears for a local cause, and correct any abnormal state susceptible of treatment. Not finding any, and the headache persisting, give chloral, gr. xx at one dose. If this be ineffectual, phenacetine, gr. iij, ever hour until relieved; or, if possible, the galvanic current applied to the painful part, and counter-irritants behind the ear. For the dysmenorrhea, hot rectal injections, bromide of potassium, and rest in bed, for a day or two before the pain is expected, and until it stops; rest in bed, avoidance of stimulant food or drink, and bromide during the flow, and digitaline to lessen its profuseness.—W. F. WAUGH.]

The Medical Digest.

GONORRHŒA.—The use of urethal injections, especially those of a strongly astringent or irritating nature, is gradually being abandoned in the treatment of gonorrhœa, and constitutional treatment alone relied upon. Better results have followed this course and fewer complications and troublesome sequelæ, such as orchitis and stricture, have occurred. A suspensory bandage is to be worn from the very first onset of the disease. The urine should be kept bland and unirritating by mucilaginous and alkaline diuretics. Stimulants and exercise must be avoided, and a soluble condition of the bowels maintained; sexual abstinence rigidly insisted upon. These measures will generally carry our patient through safely and quickly, and without complication, although occasionally the bromides or even small doses of morphine, may be required to allay pain and nervous irritation.—*Eclectic Med. Jour.*

CANCER OF THE RECTUM.—Mr. Harrison Cripps read a paper on "Rectal Excisions for Cancer and the Selection of Suitable Cases, and Prognosis." He said that any attempt to make excision the common treatment of cancer on this part, would only bring discredit on the operation. In only a few carefully selected cases was operation feasible. Severe operations extending high up were justifiable only when there was a fair chance of completely removing the disease. After partial excisions, the remaining morbid growth increased more rapidly than ever. All rectal cancer was glandular carcinoma. The younger the patient the earlier were other organs involved. In examining the patients no anæsthetic was, as a rule, needed. In doubtful cases, however, ether might be given and a more thorough examination be thus made possible. The speculum was of no practical diagnostic value. Cases in which there was a tight stricture with prolapse from above, were not favorable for operation. In such cases the finger might be passed into the cul-de-sac on one side, and lead to the belief that it had passed the growth, which might be thought not to extend all round the bowel. When the growth was fixed, operation was unadvisable.

Favorable cases were those in which the surface of the diseased portion resembled an ulcer, and did not extend entirely around the gut, those in which the upper border of the growth could be defined and healthy mucous membrane felt above it, and, finally, those cases in which the neoplasm was freely movable, both laterally and vertically. Most cases would come with one or another of these categories. Of four hundred cases which the speaker had seen, he had advised against operation in one-half. In thirty-eight he had operated by excision, and in seventy-six by colotomy; the remainder refused to submit to any operation. He had been able to trace the subsequent course of twenty-eight of these operated cases. In fifteen recurrence was known to have taken place; in one year in ten cases, and between one and three years in five cases; one case died without recurrence, and in eleven none had, as yet, occurred, although one of these was operated on twelve years, and several of them three years ago. After operation, stricture was likely to occur during the first and second year, and was often trouble-

some, but, if properly treated, the tendency gradually disappeared. One patient, in which the recto vaginal septum was involved, had since given birth to a healthy child, and had had, as yet, no recurrence. Contraction was apt to occur after the fourth week. A bougie should be passed and kept in for some hours daily after the first fourteen days. This should be continued for two months, and after that, the bougie might be passed at intervals. The mortality rate of the operation was less than 8 per cent., and the result was hopeful in selected cases.

—*Med. Record.*

The Lessened Vitality of Females at the Time of Puberty and Adolescence is a striking fact, according to Sir James Crichton-Browne. Throughout life, in every quinquennium, the mortality of males from small-pox exceeds that of females, and that in a very marked degree, except in one quinquennium, from the tenth to the fourteenth year, when the female exceeds the male mortality, being again but very slightly behind it in the succeeding quinquennium from the fifteenth to the nineteenth year. At all ages the male death-rate from enteric fever exceeds that of females, but the female mortality is very considerably higher from the third to the twentieth year of life. In infancy, and also in old age, the male mortality from diarrhœa and dysentery exceeds the female mortality, but in the child-bearing period, from fifteen to forty-five years of age, the mortality is distinctly higher among females. And even more striking in this connection are the statistics of phthisis than those of zymotic diseases. Phthisis is more fatal to males than females under five years of age; but then a change takes place, and from five to ten it is much more fatal to females than to males; while from ten to fifteen it is more than twice as fatal to females as to males. From fifteen to twenty phthisis is still much more fatal to females than to males; from twenty to twenty-five the mortality from it is exactly equal in the two sexes, and from twenty-five to thirty, and at all subequent ages, the mortality from it is much greater among males than among females. Dr. Browne is inclined to attribute this to over-pressure in education; but surely there are many other factors more important in lowering the vitality of young women.

—*Med. Record.*

Treatment of Spinal Abscess.—Mr. Watson Cheyne, of London, opened the discussion on this subject. He said that there was no greater proof of the progress in surgery due to Lister than the advances made in the last two years in the treatment of spinal abscess. He would divide the history of treatment into three periods: the pre-antiseptic, the early antiseptic, and the present antiseptic period. The results of treatment in the first period were decomposition after rupture or incision, sepsis and death, or hectic fever and lardaceous disease. Rest was the best treatment at that time, in the hope that absorption might take place. It was difficult to tell how often abscess was absorbed. Lannelongue held that this often happened, as shown by necropsy, but the speaker thought that the cheesy material which was taken to represent old abscess was often only degenerative tubercle. Late in the first period, aspiration or valvular incision gave better results. In the early antiseptic days the pathology of chronic abscess was thought to be the same as that of acute suppuration. Drainage with antiseptic precautions was therefore advocated. In 1888 Mr. Cheyne collected 58 cases thus treated, of which 49 remained aseptic; of these 38 were cured, 6 were still under treatment, and 5 died of tuberculosis.

The objections to this method were the length of time the treatment required, and the fact that the tuberculous material was left behind. Repeated aspiration before incision was then advocated, and the best time to open was also discussed. The general conclusion was that abscess should be opened as soon as possible, and as to situation, it was more important to keep away from sources of infection such as the perineum, than that the opening should be at the most dependent part.

At the present time it is known that the pathology of chronic abscess is not the same as that of acute. These abcesses are really tubercular tumors containing pus, and, therefore, simple drainage is not a radical method of dealing with them. The first attempt to deal with the tuberculous material was by applying an antiseptic to the walls of the abcess by the injection of iodoform in glycerine, or ether. Sinus generally resulted, and some deaths were recorded. In one case under the care of Mr. Stanley Boyd, after injection of two drachms of a ten per cent.

solution of carbolic acid, collapse, vomiting, carboluria, and death occurred. We now saw that the wall must be dealt with by scraping, and this method the speaker had used for the last four years. An incision should be made large enough to admit the finger, and the Volkemann or Barker spoon should be used; but where the peritoneum or large vessels formed part of the wall, rough sponges should be substituted for the spoon. Irrigation should be continued during the process. One or two ounces of iodoform emulsion might be injected and the wound closed by sutures.

In 24 cases of lumbar and psoas abcess thus treated, 13 healed by first intention, but 2 afterward returned with sinus. In 7 cases a small sinus remained in one part, of which 4 were operated upon a second time successfully. Nineteen cases out of the 24 were either cured at once or after a second operation. Three cases ended in death from pneumonia and other causes, and one child of two years died in collapse. In this case no iodoform was used. In post-mortem nothing was found to account for death, which might perhaps have been due to fat embolism or injury to the sympathetic. The method was not absolutely safe, but the risk was worth running. Excision of the sac of the abcess entire was only possible when the laminæ were affected. When psoas abscess was confined to the abdomen, it might be treated by lumbar incision; when in the groin, by incision near the anterior superior iliac spine. In lumbar abcess the sac should be excised, the canal leading to the bones stretched, and the vertebræ scraped as far as possible. For irrigation he used a 1 in 10,000 solution of corrosive sublimate.—*Medical Record.*

Enlarged Prostate.—Mr. Reginald Harrison read a paper on the "Restoration of the Lost Function of Micturition," and referred to a paper read by him at the meeting of the International Medical Congress at Copenhagen, on the treatment of enlargement of the prostate by stretching, incision, or partial excision, with drainage through the perineum.

The results of thirty-five cases were restoration of micturition in ten, besides the immediate relief of obstruction. By tunneling the prostate in an old man of eighty-five, micturition was restored, the gland shrunk, and the patient remained well until his death, at the age of ninety. Restoration of micturition after prostatotomy or prostatectomy, was frequent, even in patients who had been dependent on the catheter for years, and these cases, if left alone, were generally fatal. Operation was, however, not always called for, but only when relief by catheter was inadequate or impossible. In the earlier stages of enlargement, medical treatment was of more avail than was supposed. The long use of ergot, alone or combined with cantharides and nux vomica, often improved or restored the function of the bladder-muscle. The speaker maintained that the functions of the prostate were largely urinary, and not genital only. He related a case in which he divided the bar of prostatic tissue that blocked the passage. The cut ends retracted, showing that fibrous degeneration had taken place. This patient never used the catheter after the operation.—*Med. Record.*

Ulcers of the Leg.—Dr. Sidney Gramshaw read a paper on the treatment of chronic ulcers of the leg by a new method. In old varicose ulcers, Martin's rubber bandage was sometimes useful, but often failed, and it had the disadvantage of leaving the skin tender. The speaker's method was to cleanse the ulcer by hot water gruel applied personally for half an hour, and to make the patient repeat this frequently for three days. He then applied a solution of one drachm of nitrate of silver in four ounces of flexible collodion. This must be kept in the dark, and painted over the surface of the ulcer, and for one-third of an inch beyond. A piece of lint cut to the shape of the ulcer, but a little larger, should then be smeared with an ointment consisting of one part of prepared chalk to seven of spermaceti ointment. The gruel should still be applied and the ointment renewed daily. Cure generally resulted in one month. He had only had one failure. In very bad cases it might be necessary to repeat the application of the caustic, or to use a stronger solution to begin with.—*Med. Record.*

Summary of the Opium Discussion at the Calcutta Medical Society.—The following propositions may be garded as representing the gist of the d cussions:

1. That opium eaters constitute from 5 to 10 per cent. of the people of Bengal, and that in certain parts of India, especially Rajputana, Gujerat and Sirhind, etc., the proportion is probably much larger. In some of these parts opium assumes the position in social life and ceremonial so long granted to alcohol in other countries.

2. That the purposes for which the opium habit is contracted are, as a prophylactic against, and in the treatment of malarial fever, to alleviate rheumatic pains, to cure chronic dysentery and diarrhœa, chronic bronchitis, asthma, dyspepsia, and diabetes, and very often as an aphrodisiac.

3. That the use of small daily doses of opium is probably of distinct benefit in almost all the diseases enumerated, but especially in diabetes and as a prophylactic against malaria in damp districts; and also as enabling men to undergo prolonged muscular exertion on a small allowance of food. That it is a prophylactic also against other diseases as cholera, asthma, etc., was not generally admitted.

4. That it is somewhat exceptional to begin the habit before thirty years of age, and that in the large majority it is begun between thirty and forty.

5. That the average daily ration probably does not exceed 7 grains in the mofussil (Vincent Richards); but is probably larger in towns. 45 per cent. of the cases investigated by Dr. Ram Moy Roy consumed less than 12 grains daily, and 95 per cent. less than 24 grains daily. In estimating the effect of these doses, the small quantity of morphine contained in Indian opium must be kept in mind, namely, 1.5 to 7 per cent., against 10 to 21 per cent. in Turkey opium.

6. That the moderate daily consumption of opium is compatible with good health, bodily and mental, and does not obviously tend to the production of any disease, or to shorten life. 72 per cent. of the cases quoted by Dr. Ram Moy Roy were over fifty years of age, and 37 per cent. over sixty.

7. That the most usual ill-effects of the opium habit are hebetude, lassitude, indifference to external impressions, timidity, a tendency to neglect business and to diminution of the birthrate; and when the quantity consumed is large, to emaciation, disorder of the bowels, and early death from some intercurrent disease. These results are, however, apparently not of frequent occurrence. It is sometimes an indirect incentive to pilfering and petty theft; but even when taken in excessive quantities, it does not lead to perceptible tissue-changes, to grave or violet crime, to insanity or to infringements of public decency or order, or frequently to domestic unhappiness.

8. That the habitual use of even very large quantities (of a drachm and upwards) is often compatible with the enjoyment of excellent health, the keen and successful pursuit of business, and an honored old age. Instances were referred to of men consuming a drachm of opium daily for forty years, meanwhile accumulating large fortunes: of one man who died at the reputed age of one hundred and six in the complete possession of all his faculties and in the management of an important business, who had eaten ninety grains of opium daily for the last sixty-six years of his life; of a Sunyasi (Pindu devotee) sixty years of age who took the incredibly large allowance of 22 tolahs (9 ounces and 225 grains) daily, without obvious ill effect.

9. That the morphine habit is extremely rare in India, and is confined to large towns. Reference was made to a pleader who carried on his business for many years on a daily ration of 90 grains of morphine.

10. That *chundoo* is the preparation used by Chinese in smoking opium; that it is universally smoked by Chinamen in Calcutta, and also by a small and fairly well-to-do section of the native community; that the Chinamen are the healthiest, most industrious, intelligent, and orderly section of the community; and there does not appear to be any reason to think that *chundoo* smoking is more harmful, bodily, mentally, or morally than tobacco smoking.

11. That *madat* is the preparation for smoking used by natives of lower social position. Evidence was adduced to show that *madat* smoking is capable of inducing deteriorated health in a considerable number of those indulging in it.

12. That the misery evinced by the opium eater, when deprived of his daily ration, must be largely discounted; first, because of the theatrical modes of expressing grief and misery habitual with natives on all occasions; and, secondly, because of the ease with which they can be deceived by substituting gentian, etc., for

the habitual opium pill. The pleader referred to above, accustomed to 90 grains of morphine and in apparent danger of imminent death when deprived of it, was completely comforted by a bolus of flour containing 10 grains of morphine on one day, and by a bolus consisting entirely of flour on subsequent days.

13. That the reduction of an opium eater's daily ration is neither difficult nor infrequent. One of the speakers, himself an opium eater, had without difficulty reduced his quantity from 24 to 6 grains daily.

14. That the substitution of one form of intoxicant for another is not infrequent; and that obstacles placed in the way of those accustomed to eat opium would probably lead to an extended use of alcohol and *ganja*.

15. That alcohol and *ganja* are incomparably more deleterious in their effects on the human constitution and on society than opium. Alcohol is a potent cause of tissue-changes affecting the vital organs, and its abuse leads indubitably to early death. Reference was made to several families which had become extinct in Calcutta through alcohol. That it is a direct and frequent cause of crime and violence; that of 100 persons apprehended by the police in Calcutta in a condition of intoxication, over 99 per cent. are drunk with alcohol; that it is a frequent cause of poverty, insanity, and domestic misery, and of bodily and mental weakness in the progeny. That *ganja* is an excitant of the most powerful description, leading to violent crime, to acute mania of homicidal tendency, and is the most frequent cause of chronic insanity.

16. The figures for the lunatic asylums of Lower Bengal for the past ten years, show that of 2,202 admissions, 641 were *ganja* smokers, 117 spirit drinkers, and 8 only were opium eaters. The figures for the other provinces of India show similar results.—*Indian Medical Gazette.*

Solar Cautery in Lupus Exedens.—In the *Pacific Medical Journal*, Dr. O. V. Thayer describes a case of lupus exedens, treated by the solar cautery, as follows:

With a powerful lens with a focal diameter of three lines, with a clear sky and unobstructed sunlight (essentials in the success of the use of the solar cautery) I most thoroughly cauterized the diseased surfaces, destroying the morbid tissues. This was accomplished in the space of two minutes of time.

The cauterization was not very painful, all pain ceasing after the removal of the lens. I cannot recall one single instance where severe pain continued for any length of time from the use of the cautery. Having treated by this method more than one thousand cases, I certainly would remember some of those complaining of severe pain after the operation. I dressed the burned surface with zinc ointment, over which was placed a layer of absorbent cotton wet in 5 per cent. solution of carbolic acid, followed by a thicker layer of dry cotton. The next day there was more or less swelling of the parts, some redness of the adjoining skin, with more or less tenderness.

Thirty-six hours after the operation an improved condition was visible. The same dressing was continued, being changed daily. The improvement went rapidly forward, the discoloration of the lip and nose disappearing from day to day. Two weeks after the operation this lady presented herself at my office with the ulcerated surfaces most thoroughly healed, with a slight but smooth cicatrix. The discoloration of the skin in the immediate neighborhood had disappeared, and the diseased surfaces assumed quite a natural appearance.

Anæmia and Mountain Air.—That *mal de montagne* is as distinct an ailment as *mal de mer* may be realized by all who make mountain ascents with great rapidity. *Puna* is its name on the Cordilleras and the high tablelands of Mexico, where, moreover, it has been known to cause death in subjects unseasoned to it by habit. It is due to the lower pressure of the atmosphere incident to lofty altitudes, or rather to the reduced oxygen pressure, whereby the gas is no longer capable of being dissolved in sufficient quantity in the blood of individuals accustomed to live in the plain. In such individuals, however, acclimatization gives immunity from the *mal de montagne*, the circulation gradually increasing the number of the blood globules which, in greater mass, dissolve ever greater quantities of oxygen, and more than make up for the reduced pressure of the gas. It is to M. Paul Bert that we owe the experimental proof of this. Examining the blood of the llama or Peruvian sheep, he found that

for every 100 cc. it absorbed, on an average, 20 cc. of oxygen, while in the herbivora of the plain the respiratory capacity of the blood did not exceed 15 per cent. Viault, with identical results, repeated the experiment on the spot. Müntz had the same experience on the Pic du Midi, where he left rabbits of the plain to live freely, and after a year found their blood much richer in hæmoglobin than that of the rabbits kept for comparison on the lowlands. To the experiments above mentioned, however, it may be objected that the increase in the hæmoglobin might be due to cold, to the open-air life, in short to the special conditions of the atmosphere, which stimulate appetite and assimilation in animals. In answer to such objections Regnard, in his laboratory, subjected a rabbit, enclosed under a bell-glass, to a continuous atmospheric depression, two bell-glasses being so placed together as to admit of the rabbit passing from one to the other when it became necessary to effect certain cleaning and disinfecting operations. After a month of this incarceration, where the atmospheric depression was such as to correspond with that of the Great St. Bernard or of Santa-Fé de Bogota (height about 3,000 meters), the rabbit emerged, not very lively indeed, but to some small degree fatter. On the blood being examined, it was found that it absorbed 21 cc. per cent. of oxygen —that is to say, as much as that absorbed by the blood of the Peruvian sheep; while the blood of rabbits kept under normal conditions in the plain absorbs only 17 cc. It is, therefore, the atmospheric depression which increases the respiratory capacity of the blood in animals. Regnard's confirmation of his predecessors' results serves to explain the efficacy of certain climatic resorts in Switzerland, particularly in anæmic and chlorotic patients, and in sufferers from neurasthenia. It is the atmospheric depression which, in conjunction with good hygienic conditions, acts on those invalids and promotes in their blood the formation of new sanguineous globules fit for the assimilation of oxygen. The more abundant nutrition and the augmentation of the appetite observable in a sojourn in the mountains are not the cause, but a consequence, of the improvement which such sojourn brings. Indeed, even admitting that the hæmatogenous action of elevated sites may owe something to other causes, as Viault contends, it is difficult to resist the induction of Regnard that climatic establishments are in general to be preferred to mineral water resorts—certainly to those whose reputation is chiefly built on fashion, on entertainments, or on the *ensemble* of adventitious attractions, from which health pure and simple has little or nothing to gain.—*Lancet.*

Treatment of Diphtheria.—Prophylaxis requires that the attending physician should protect himself, and also warn the attendants of the patient of the danger of contact with the false membrane. Those who have nothing to do with the care of the patient should be kept out of the room. In order to abate the fever, quinine stands first in my experience. As a local application, I have used the liquor bromole in 134 cases without a single death. This solution removes the membrane rapidly, stops the fetid odor, and arrests putrefaction. I have seen one application of liquor bromole remove a piece of membrane as large as a silver dollar. A fluidounce of this solution contains:

Water	480 grains.
Bromine	8.7 "
Phenol	3.3 "

This solution has an alkaline reaction to litmus paper, and is rationally indicated as it neutralizes the acid exudation or product of the diphtheritic bacillus. I use the solution as in the above formula with absorbent cotton on a probang, and apply it every two or three hours.

In my experience, liquor bromole has proven to be a great anti-germicide. I have used it in gonorrhœa with great success; it rapidly kills the gonococcus, and cures the disease in three days.

The formula I use is the following:

℞.—Liquor bromole..... ℥ii.
Aqua destil.....q. s. ℥iv.
Sig. Use as an injection.

As a wash in old syphilitic ulcers, it is a specific. The same may be said of it in sloughing perineal abscesses, and also as a uterine douche in puerperal fever.

—Rademaker, in *Med. Mirror.*

Sulfonal in the Cramps of Fractured Limbs, and Reflex Spasms from Other Causes.—It is curious that the numerous writers who have reported upon this new drug have almost uniformly

confined their attention to its sleep producing influence, and overlooked its remarkable antispasmodic power. In fact, Dr. W. F. Shick, writing in 1889 to the *Journal of Nervous Diseases*, went so far as to say that the drug has no influence on motor nerves, nor on the muscles. Four or five writers, however, have caught slight glimpses of its antispasmodic power.

Forster, who is said to have administered not less than eighteen pounds of it, remarked that it is chiefly a motor depressor.

Roubinovitch in one case cut off a paroxysm of spasmodic asthma, by doses of fifteen grains.

A. S. Faulkner, of India, reported one case of chordee arrested by it.

J. M. Coates reported the greatest benefit in epilepsy, and in obstinate hiccough.

J. A. Jeffries reported five cases of chorea rapidly cured by the article.

My first observation was upon a case of painful cramps from a recently fractured femur. Morphine relieved the patient as long as he could keep awake, but as soon as he became drowsy the cramps returned. On changing to suffonal in fifteen grain doses the spasms were completely arrested both in the waking and the sleeping condition. Repetition of the treatment in other cases of fracture showed always the same result.

A gentleman in a railroad accident received a slight fracture of the spine without any compression of the cord. He was harassed whenever he fell asleep by cramps of the inter-costal muscles adjacent to the injured vertebra. Sulfonal in fifteen grain doses arrested the trouble completely.

I may remark here that the drug is slow in its action, and where the cramps are only nocturnal, it is necessary to give either a large dose two or three hours before the sleeping time, or else to keep up the effect by using moderate doses three times a day.

I found one physician using this medicine to arrest the spasms of ejaculatory muscles which cause nocturnal emissions of semen. He gave six grains three times a day, and claimed excellent results. At his suggestion I tried it with good success, increasing the dose, however, to eight grains.

From analogy I think the remedy will act well in cases of premature ejaculation in copulation, but I have not yet tried it for that purpose.

I have used sulfonal to arrest two cases of obstinate hiccough.

A gentleman was troubled for many years with nocturnal cramps of the legs and thighs, increasing slowly as his years advanced. Fifteen grains of sulfonal, taken before retiring, always prevented the spasms. After two months he found that a single dose would prevent the trouble for nearly a week. In about ten weeks more the course of the trouble seemed to be cured, so that he has now been a long time without requiring or taking any of the remedy.

A vigorous young man, engaged in superintending the construction of a building, fell thirty-two feet, striking obliquely on a slope of timber, causing a severe contusion of the right sciatic nerve, without fracturing any bone. The thigh and leg of the injured side kept up a constant and painful jerking motion, resembling somewhat the movements in chorea. Two doses of sulfonal, of 15 grains each, completely arrested the distressing movements.

It seems that the antispasmodic power of sulfonal is of more value than its sleep-producing influence, and that it will prove of immense value in many cases in which no one has yet thought of giving it a trial.

Dr. Brooks, of Iowa, stated that he had sustained a fall, resulting in a severe synovitis, which caused sudden spasmodic contraction of the leg during sleep. Sulfonal was prescribed, and the spasms relieved from the first.

Dr. Murphy reported the case of a pregnant woman who suffered much at night from cramping in the legs. He prescribed sulfonal, and found that one dose was usually sufficient to give relief. He has used the drug in two other cases with excellent results.

Dr. James A. Work, of Indiana, has a patient to whom he has been giving sulfonal for rheumatism, attended with cramps of the legs at night. The remedy acted admirably, but he had often been asked if there was not danger of a habit being formed. It was a relief to know that as the case progresses less of the drug is administered.

Dr. J. I. Strittmattar, of Philadelphia, stated that he had found the drug useful in the low nervous form of typhoid fever, accompanied with jactitations. He related a case in which there had been no

sleep for six days; 20 grains of sulfonal were given, and the patient slept for twenty-four hours, only being aroused to take food. Recovery was thenceforth uninterrupted.—Andrews, *J. A. M. A.*

Anatomy of the Hymen.—Dr. Cullingworth read a note on the "Anatomy of the Hymen and on the Posterior Commissure of the Vulva," in which he maintained that the ordinary text-book description of the hymen was erroneous, and that the hymen of the adult virgin normally consisted, not of a fringe of membrane surrounding a circular or oblong aperture with its edges lying apart, but of a long, vertical fold of mucous membrane with its edges (when a patient is lying in a dorsal position) directed forward, and divided, along about three-fourths of the summit of the fold, by a vertical slit. This slit constituted the orifice of the vagina. Normally, no actual opening was seen, either into the vagina or into the urethra. The orifices of both were vertical slits, bordered by lips, the inner surfaces of which were in close apposition, and the edges of which were like those of the labia minora, directed forward. The point had a very important practical bearing, for it was the anterior extremity of this hymeneal fold that, being prolonged forward and partially concealing the aperture of the urethra, constituted that fleshy caruncle which was recommended as a guide to the urethra when passing the catheter. It was obvious that when, from any cause, the vaginal orifice had become dilated, the relations of the hymeneal fold would be permanently disturbed and its anterior apex could no longer be relied upon as a landmark. The only reliable guide to the urethra was obtained by passing the forefinger of the disengaged hand into the vagina, and placing its palmar surface against the anterior wall, where the urethra could be felt as a cord-like prominence imbedded in its tissues. This method not only had the merit of being universally applicable, but had the further advantages of preventing the slipping of the catheter into the vagina, of avoiding the contact of the finger with the sensitive parts in front of the urethra, and of enabling the finger to feel and direct the instrument in its course along the whole length of the urethra. In his twenty years' experience as a gynecologist, Dr. Cullingworth had never yet seen a case where the hymen was absent, or even where it failed to be easily demonstrable. Occasionally the lips of the hymen were so deeply notched laterally that the edges came together in a cruciform manner. A cribriform hymen he had never seen, and he did not believe that it existed. In the latter part of his paper, Dr. Cullingworth confirmed from clinical observation the statement of Luschka that the structure of the fourchette, or anterior border of the perineum, was continuous with that of the labia minora and not of the labia majora. He also called attention to the fact that the duct of the vulvo-vaginal, or Bartholin's gland, did not, as was often asserted, open into the fossa navicularis, but by the side of the vaginal orifice in the groove between the attached border of the hymen and the labium minus, a little nearer the vestibule than the fourchette.—*Lancet.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. Bing, M.D., Chester, Pa., Translator.)

Some Disorders Provoked by Adenoid Vegetations in Young Children (*Revue Mensuelle*).—Lubeb Barbon passes in review:

1. Troubles of alimentation determined by respiratory difficulty, experienced at the moment of nursing, causing it to relinquish the nipple from time to time, in order to get breath. Sometimes the milk falls into the larynx, causing cough and, sometimes, vomiting, often resulting in inanition.

2. *Respiratory Troubles.*—Open mouth; dilated nâres; pale, emaciated and drawn features; painful, harsh respiration; restlessness. During sleep, insufficiency of oxygen may determine poisoning of the medulla and provoke spasm of the glottis. The stertor is much increased during sleep, and abundant sweats occur. Constant coryza; frequent sneezing, with a secretion of muco-pus from the nostrils; in time, the palatine glands may become enlarged.

The forced respiration may at length determine emphysema. Slow, sucking respiration brings about thoracic deformities, sometimes permanent.

The diagnosis is deduced from the ensemble of the symptoms. In syphilitic coryza, the flow is sero-sanguinal and offensive, but the cough is not so marked.

Digital exploration will generally disclose the presence of vegetations.

Treatment.—To act on the nasal catarrh by the introduction into the inferior meatus by applying boric acid ointment (one-fifth) on cotton. If the symptoms do not yield, the vegetations are removed by scissors. The operation can be done at one or more sittings. Seizing of the vomer and secondary hemorrhage are rare complications, as also are consecutive inflammatory symptoms.

—*L'Union Med. du Canada.*

The Influence of Costume in the Production of Floating Kidney in Woman (Karangi).—A writer has mentioned the influence which the corset has in the production of this condition. The author believes, however, that the principal factors in the etiology are the weight of the clothes and the height of the heels of the shoes. In man in the upright position the center of gravity is in the second lumbar vertebra. The vertical line passes behind a line drawn from the center of the pelvic articulations, transversely.

According to experiment, if under a person 150 c.m. in height a heel of 5 c.m. is placed, the inclination will be 15 degrees forward. To maintain equilibrium the head and chest are carried backward, and the pelvis, with the lumbar vertebræ, are inclined forward. As a result of a number of experiments made on the living, it is shown that the part of the vetebral column, between the ninth dorsal and the second lumbar vertebra, is almost immobile, and that from the wearing of high heels the lumbar curve is increased at the expense of the section of the column between the second lumbar vertebra and the sacrum.

This is the situation of the kidneys, the inferior portions of those organs, especially of the right, are carried forward in correspondence with the increased curvature. It has been demonstrated on the cadaver that this curving produces convergence of the organs below, instead of above.

By experiments on the cadaver the above consequence has been shown, and the author concludes that high heels, together with the weight of the clothing, are the factors in the production of the condition.—*Gaz. de Gynecologie.*

"In Re Brown-Séquard."—Pochl has communicated to the Academy of Sciences the researches which he has undertaken on the chemical composition of the testicular liquid. He has recognized besides the albumenoids of lecithine, nuclein, and numerous leucomaines, a quite appreciable proportion of spermine.

This last base he found not only in the testicles and prostate, but in the ovaries; the pancreas, in which it is abundant; in the thyroid gland; the thymus; the spleen, and in normal blood. He thinks that he has found the explanation of the phenomena observed with the testicular liquor, as well as with spermine extracted from the testicle and employed in the form of pure hydrochlorate. This base is not an ordinary agent, but it determines acceleration of oxidation mineral as well as physiological. Thus blood very much diluted, and commencing to putrify, oxidizes very rapidly guaiac paper, if a small quantity of chlorohydrate of spermine has been added to it. By adding a little of this substance to blood which has been submitted to the action of such agents as chloroform, carbonic oxide, etc., which diminish the oxidizing power of the blood, the property of carrying oxygen to the tissues is restored. This action is independent of the amount used, and the blood shows no change spectroscopically. This property of causing by its presence an increase of oxidation explains the phenomena which spermine produces in man and animals. It makes clear the happy effects produced by the substance in individuals, under the influence of chloroform. Its favorable action in diabetics finds its explanation in the diminution of spermine produced by the pancreas of these patients.

The action of spermine as a tonic and nervine is easily explained, according to Pochl's theory, since this base acts as stated above. Further, the more rapid oxidation of the leucomaines, the more complete disappearance of extractives, and the sensation of general *bieu-être*, which the subjects experience are phenomena stated by all observers.

—*Annales de Médicine.*

Asphyxia by Submersion (Brouardel).—Referring to a recent paper, by Laborde, on the subject of asphyxia by submersion (see Times and Register, July 30) Brouardel notices the different modes of death in this connection.

In one case, an individual falls into the water, and may die at once from inhibition of the tringeminal and superior laryngeal nerves, produced by the shock of the cold water. If death should not occur at once and he is quickly rescued, he generally revives under ordinary treatment. In a second case, the individual falls into the water and remains at the bottom. During the first minute no fluid penetrates the lungs, on account of spasm of the respiratory passages; then at the end of this period the spasmodic condition relaxes and the water enters the lungs. Thus, in drowning a dog weighing five killos, it has been proved that in one minute 400 grains of water have penetrated into the respiratory passages. Under these conditions, if quickly taken from the water, life may be saved. Generally, people who drown, sink, then come to the surface, sink again, and finish by staying at the bottom of the water. In this case there are produced contractions of the diaphragm which causes the contents of the stomach to regurgitate into the pharynx and thence into the air-passages; in a few minutes the quantity of water which passes into the trochea and bronchi, and which is absorbad, corresponds to a quarter or a third of the total quantity of the blood.

Persons in this category have not only the bronchi and pulmonary alveoli filled with water and mucus, but also a degeneresence of the epithelium of the alveoli, which in a few minutes makes a return to life out of the question.

Those in whom the bronchi are intact may be rapidly restored. On the contrary, it is difficult and often impossible to reanimate the others.—*Med. Moderne.*

THE THERAPEUTIC USE OF SYRUP OF CHLORIDE OF IRON (Ved.).—Owing to its destructive action on the enamel of the teeth and liability to disturbance of the stomach, the tincture of iron is objectionable. It may be advantageously replaced by the syrup. In this preparation the excess of acid is neutralized by an alkali, and while still presenting an acid reaction, it does not attack the teeth nor discolor the tongue. When it reaches the stomach, it meets the free HCl and becomes therapeutically identical with the tincture. The syrup is more assimilable, and neither gives rise to nausea nor digestive trouble. Dose, ʒss, three times a day.

—*Le Medicine Moderne.*

TECHNIQUE FOR THE RAPID STAINING OF B. TUBERCULOSIS IN SPECIMENS PRESERVED IN MULLER'S FLUID (Letulle).—The frequently insurmountable difficulties experienced in coloring Koch's bacillus in specimens, out of Muller's fluid, is well known.

Inversely the rapid hardening of the tissues by absolute alcohol, while it permits easy staining, offers the serious inconvenience of profoundly changing the form and connection of the cellular elements of the tissue.

The proceeding is that of Russel for the staining of hyaline structure. The sections are—

1. Treated by hematoxylin which stains the nuclei, then washed with water; then
2. Placed for a quarter of an hour in carbolized rubine, the formula for which is as follows: Carbolized water, 2 per cent.; rubine, sufficient to saturate.
3. Washing for one minute in water.
4. One-half minute in absolute alcohol.
5. Five minutes in carbolic solution of iodine gum (carbolized water, 2 per cent., 100 grms.; iodine gum—vert d'iode—1 grm.).
6. Washing in absolute alcohol until bleached sufficiently.
7. Placed in oil bergamot, followed by
8. Xylol;
9. Mounting in "xylol" balsam.

This technique is always successful, and only needs slight watching at the moment (6) of bleaching in alcohol, and does not require more than half an hour for the whole process.

It shows remarkable differentiation, for the nuclei are stained violet; the hylane structure, cherry red; the bacilli, carmine; showing very naturally on the grayish-tinted ground.

It allows, in short, a study of the bacilli in their exact connection with the tissues.

—*La Medicine Moderne.*

TRANSMISSIBILITY OF TUBERCULOSIS BY BED BUGS.—Dr. Dewees reports a case of tuberculosis occurring in a boy who occupied the bed of a brother who had previously died of phthisis. The room had been carefully disinfected. The failure of the disinfectant to protect was explained when it was found that the bed had been overlooked and that it was swarming with bugs, who had left the marks of innumerable bites on the boy's body. The question was, whether these

insects could play a part in the contagion, and having collected thirty of them, he made cultures and inoculated three guinea pigs, who soon died tubercular. Direct examination showed that 60 per cent. of the insects were tubercular. Finally, in another series of experiments, the bugs placed in contact with tubercular expectoration gave, some weeks later, very active cultures. It appears probable that infected bugs may convey contagion through their bites, and may transmit the infection among themselves, from generation to generation.

—*Revue Medicale.*

THE "TUBERCULOSIS" CONGRESS IN 1893.—The following are the questions to be put before the Congress, which meets in July, of next year:

1. The respective rôle of contagion and heredity in the propagation of tuberculosis.

2. Infectious diseases as predisposing causes of tuberculosis. Of the part taken by some among them in the localization of tuberculosis, *e. g.*, Gonorrhœa, in tubercular testicle; Grippe, in the causation or aggravation of pulmonary tuberculosis, etc.

3. The intermission of tuberculoses, their duration, means of recognition and anticipating their cessation; the causes of recurrence.

4. The several means of diagnosis of bovine tuberculosis. To discover if the inoculation of tuberculine is a sure and certain means of establishing the diagnosis of tuberculosis in cattle.

5. Of the dangers which may arise from the practice of burial of tubercular corpses; of the opportunity for introducing cremation; of the necessity of destroying the bacilli in the bodies.

6. Of the new methods of treatment based on etiological grounds.

7. The necessity for general inspection of meat.

A prize of 3,000 francs is offered for the best work on the means of diagnosis of latent tubercle, before its appearance or after its cure.—*La Review Medicale.*

TREATMENT OF BURNS IN CHILDREN (Wertheimber).—The treatment should have for its object, first, to ease the pain, then to moderate the excessive excitement of the nervous system and the paralyzing effect which may result to the circulatory system.

The remedy which appears to answer the first indication best is iodoformized vaseline, only in case of large burns there is danger of intoxication if the remedy has to be applied for some time. The author abstains from the use of iodoform in children, and uses the pomade of Stahl, or an ointment composed of bismuth and boric acid. Sometimes the Stahl's ointment seems devoid of antiseptic effect. To remedy this, he adds a proportion of thymol. The dressing (Stahl's) is nothing more than the ordinary lime water and linseed oil, with 5 cgms. to 10 cgms. of thymol for each 50 gms. of the mixture.

The burns are washed with warm boric water. Then there are applied several thicknesses of gauze saturated with the liquid. These are renewed every day.

This dressing is inconvenient on account of its weight, and the following is preferable:

℞.—Subnit. bismuth..... gms. ix.
Boric acid..... gms. ivss.
Lanoline..... gms. lxx.
Olive oil..... gms. xx.
Used as described above.

For the nervous agitation he uses small doses of morphine and chloral. These should be suspended immediately and injections of camphor given, and tea with brandy, wine, or champagne administered.

—*Rev. Gen. de Med.*

BROMIDE OF ETHYL AS AN ANÆSTHETIC (Lubet Barbon).—The need of an anæsthetic of easy management is evident. Cocaine, while very useful, has the fault of leaving the patient conscious, however thorough the application may be; and in children it is seldom easy to persuade them that a bloody operation is not necessarily a painful one.

Many adults also, in this respect, are still children.

Again, as cocaine only acts superficially, and not on all the tissues, it is difficult to remove adenoid vegetations without pain, and also other small operations. It is therefore necessary to use general anæsthesia for painful operations, and chloroform or ether require considerable time for their action and for recovery from it, besides some dangers. A substitute for them is a desideratum.

Bromide of ethyl acts quickly and its effects are rapidly dissipated moreover. It never determines syncope. Certain rules must be followed for the desired re-

sult. In the administration one must remember that bromide of ethyl is not chloroform, that it does not act in the same way, and while great care is required with the latter, with the former it is necessary to *act quickly and to introduce the agent in large doses.* A flannel cone-shaped mask is fitted as hermetically as possible to the face, so as to take in the mouth and nose. The liquid is applied liberally to wet the whole surface of the inhaler, and is not to be applied by drops.

The patient is suffocated by the first inhalations, and tries to avoid the mask, which should be firmly held in place, knowing that the struggle will be of short duration, and the shorter as the application is more perfect. Under these conditions, five to six good inhalations generally produce anæsthesia. Sometimes it is produced before consciousness is lost, the reverse of chloroform, and one may operate on a patient insensible to pain, and who cannot defend himself, but can obey commands. This is not, however, the rule. The patient is ready when the eyes wander, the body is slightly relaxed, and the head can be easily moved about. (Larremonne.)

It would be wrong to wait for complete relaxation, as bromide of ethyl in large doses brings about rather rigidity than relaxation.

The duration of the analgesic period is short, and if it is desired to extend it, the application must be renewed as at first, as soon as the patient shows signs of sensibility. The operation concluded, waking occurs at once. There is a little drowsiness; the patient gets up from the chair, takes a few tottering steps, and quickly gains his equilibrium. Occasionally a slight excitement, resembling that produced by alcohol, may last for a few moments, but is soon dissipated.

A great advantage consists in the fact that the patient may be in the sitting position, since there is no fear of syncope.

The author has used it for three years on over six hundred cases, and has never had the slightest occasion for alarm.

—*Rev. de Laryngologie.*

ON THE NARCOSIS PRODUCED BY THE BROMIDE OF ETHYL (Gille).—The author who has employed this agent in a large number of cases, principally for the extraction of teeth, concludes as follows:

As an anæsthetic bromide of ethyl presents the following advantages:

1. Extreme simplicity of application.
2. Innocuity when employed *in small quantity only.*
3. Rapid appearance and disappearance of the anæsthetic sleep.
4. The slight inconvenience experienced by the patient.
5. The rarity of vomiting.
6. The non-necessity for an assistant.

The disadvantages are:

1. The impossibility of using it except for short operations.
2. The occasional appearance of extreme excitement during its administration.
3. The alliacious odor exhaled by the breath for two or three days succeeding its use.—*Rev. de Laryngologie.*

[Differences between the statements of Gille and Lubet Barbon will be noticed, which L. Barbon accounts for by difference in administration.—B.]

GERMAN NOTES.

(Translated by HERMAN D. MARCUS, M.D.)

THERAPIE OF TRIONAL AND TETRONAL.—Both remedies were employed for some months in the treatment of nervous and mental diseases and their action carefully observed.

The résumé of these observations are hereby appended.

1. Trional and tetronal are two remedies of positive hypnotic and sedative action. Tetronal is somewhat more of a sedative than the other. The hypnotic effects are noticeable ten to twenty minutes after administration.

2. Trional is a certain and prompt hypnotic in insomnia of the different forms of neurasthenia, functional psychosis and organic brain lesions. It is useless in such cases which had been addicted to morphine or cocaine, or in which physical pains were patent.

3. Tetronal is indicated as hypnotic in psychosis in which motoric agitations are a hinderance to sleep.

4. Both remedies are not recommended as hypnotics in such cases of mental excitement which are accompanied by excessive restlessness.

5. The dose is from 15 to 30 grains. Single doses of 45 to 60 grains, and daily doses of 90 to 120 grains may be given without fear.

6. It is best given in milk or wine, and just before retiring.

7. No bad symptoms are noticed folfowing its use, except some very slight gastro-intestinal disturbances; and

8. A prolonged use of these drugs has shown no ill effects whatsoever, nor was any habit noticeable.

—Dr. A. Schaefer, in *Berl. Klin. Wochenschrift.*

CHLOROFORM IN TYPHOID FEVER.—The researches of Behring regarding disinfectant influence of chloroform on the typhoid fever bacillus, induced Dr. Werner to employ this drug in the treatment of enteric fever—treating about 126 cases with chloroform.

He used, generally, a 1 per cent. solution (aqueous) of chloroform, giving 1 or 2 teaspoonfuls of the solution every hour or two. As soon as the symptoms improved he increased the time between the doses, giving ʒi to ʒii every two or three hours, and so on until finally only a few drachms were given daily.

The progress of a case under such treatment was as follows: None of the patients died. The tongue became cracked and dry in very severe cases, but the oral cavity did not show the black, foul-smelling coating peculiar to the disease. Severe diarrhœas were gradually improved; tympanitis disappeared quickly wherever such was present or did not develop at all. No patient who came under observation fully conscious, developed nervous disturbances, and whenever such were present, two or three days were found sufficient to dispel the dangerous symptom.

No patient treated with chloroform had a relapse or other accident during convalescence.

—*St. Petersburger Med. Wochenschrift.*

HEMORRHOIDS:

℞.—Chrysarubin..... gr. xijss.
Vodoformi..... gr. ivss.
Extr. belladonna..... gr. ix.
Ung. rosæ..... ʒiv.
Mft. ungt. St. sedative and antiseptic ointment.

—*L' Union Médicale.*

IODOFORMUM DEODORATUM.—Carbolic acid and oil of peppermint are said to deodorize iodoform. Following is the formula.

℞.—Iodoformi..... ʒvi.
Ac. carbol..... fʒijss.
Ol. menth. pip..... fʒv.

—*Pharmaz. Zeitung.*

DIURETIN.—Diuretin should be administered in solution, either simply in water (5: 100), or with addition of such drugs as ol. menth. pip., ag. menth. pip., or focriculum, besides some simple syrup. Acids or acid vegetable juices should not be combined with diuretin, because a reaction is taking place which will deposit theobromine as a thick white sediment.

It is preferable not to give this drug as a powder, because by the addition of carbonic acid taken from the air a great part of theobromine becomes insoluble. The daily dose of diuretin is about fʒiss–fʒij. One dose about gr. xv.

—*Pharmaz. Centralheft.*

GUAJAKOL IN PHTHISIS.—M. P. Oliva recommends the following recipe in phthisis:

℞.—Guajakol..... ʒss.
Alcohol..... fʒv.
Ext. gentian..... fʒiiss.
Ext. caffei concentr..... ʒv.
Aquæ dest..... fʒivss.
Mst.—Two to four tablespoonfuls daily.

—*La Crónica Médica de Valencia.*

CHOLERA INFANTUM.—Dr. Sonnenberger (Worms) has had good results in the treatment of infantile cholera with resorcin, using during the first few months grs. 1½–grs. 1¾, in older children grs. 2¼–3, with or without opium. If opium is added, which may be done without danger, if no collapse is present, then ½ to 1 drop per die of the simple tincture of opium (laudanum) may be added for children up to one year; up to two years, 1 to 3 drops may be given:

℞.—Resorcini..... grs. 1½–grs. 3¾
Inf. chamon..... ʒij–ʒij.
Tr. opii..... gtt. j–gtt. ij.
Syr. cont. aur..... ʒv.
Mst.—One teaspoonful every hour or two.

—*Aug. Med. Central Zeitung.*

DIARRHŒA IN CHILDREN.—Sympson recommends the following mixture:

℞.—Acidi boracici..... ʒj.
Glycerini puri..... fʒiv.
Tr. cont. aurant..... ℈ij.
Aquæ dest..... ʒxv.
Mst.—One teaspoonful every three hours.

—*Deutsche Med. Wochensch.*

DIARRHŒA, NERVOUS.—Prof. Nothnagel recommends the following in nervous diarrhœa:

Bromide of soda..... grs. xv–grs. xxij.
Twice daily (after meals). Also Fowler's solution.

Besides these, a Prissnitz[1] compress nightly around the abdomen, and lessening the irritability of temper.

—*Allgemeine Wiener Med. Zeitung.*

A Case of Cyanide of Potassium Poisoning.—Dr. R. Wichman reports a case of cyanide of potash poisoning.

R. G., a drug clerk, had taken some cyanide. Dr. W., who was called in, gave him, after washing out his stomach, a hypodermic injection of gr. $\frac{1}{65}$ of atropine. Five minutes later the breathing became quieter and more regular; the pulse stronger. Soon the corneal reflex became normal. Another hypodermic injection of atropine (gr. $\frac{1}{65}$) was given one-half hour later; five minutes later again marked improvement. The patient became so much better that Wichman thought he could save his life, but the next morning the patient died rather suddenly, sixteen hours after the poisoning.

Death caused by hydrocyanic acid is due to cessation of respiration due to paralysis of the respiratory center in the medulla ablongata, combined with paralysis of the vaso-motor centers. Atropine is a stimulant to the respiratory center. Wichman recommends the atropine in more frequent, but smaller doses in such cases.

This is about the mode of procedure in above case: Washing out the stomach, injection of atropine (gr. $\frac{1}{65}$), cold douches over the head and nape of neck and massage, artificial respiration.

—*D. Aerzte, Praktiker.*

Poisoning with Hydrocyanic Acid.—Kobert recommends injections of hydrogen peroxide every minute at different places of the body, also washing out the stomach with hydrogen peroxide until the breath does not smell like hydrocyanic acid, and the patient seems improved. Artificial respiration will prolong the patient's life until the arrival of a physician.

The action of peroxide of hydrogen in hydrocyanic acid poisoning is due to the chemical change taking place, changing the hydrocyanic acid into oxamide, which is non-poisonous in small doses.

$$2CNH + H_2O_2 = \begin{cases} CONH_2 \\ CONH_2 \end{cases}$$

—*Pharmaz. Centralblatt.*

[1] Pressnitz compress is a compress consisting of a cloth wrung out in water (generally cold, but at times warm) applied to the parts and covered by dry flannel.—*Marcus.*

News and Miscellany.

Dr. Hale, in *Med. Standard*, claims to have had good results in erysipelas of the face by administering hypodermically pilocarpine nitrate in doses sufficiently large to produce constant appreciable diaphoresis, at the same time directing the necessary feeding and stimulation.—*Ex.*

It will certainly be news to the readers of The Times and Register that pilocarpine is useful in erysipelas!

Alexander Harken has reprinted from the *Dublin Journal* a paper in which he maintains the pathogenic unity of epistaxis and the hemorrhoidal flux, and from this deduces an argument for his method of treating both by blisters over the liver. He mentions a case in which epistaxis was due to self-abuse, and the dilated venules on the cheeks and in the mouth, signs of obstructed portal circulation, he terms facial hemorrhoids. In anemic cases he recommends chlorate of potassium and iron; the former for its hemostatic power, due to its action on the blood and its capacity of controlling and limiting the congestions of the liver. He describes in detail a number of cases in which blisters over the liver, with the constitutional treatment required by each case, produced a speedy amelioration.

The Section for Clinical Medicine, Massachusetts Medical Society, held a memorial meeting, March 10th, whose proceedings appear in the *Boston Journal* of August 25. Addresses were made concerning Dr. Henry J. Bowditch, by Drs. Knight, Wyman, Holmes, Dwight, Walcott, Bradford, Folsom, Blake, Marcy and Cushing. In the course of his remarks Dr. Holmes related the following incident:

"He was in the class before mine in the college, and I hardly knew him at all until I met him in Paris, where he was following the teachings of Louis, the favorite instructor of American students, especially of those from Boston and Philadelphia. Louis had no more devoted and ardent disciple than Dr. Bowditch. I remember, when I first met him in Paris, asking him if he was not a firm believer in Louis's theory. 'Louis's theory is not a theory,' said Dr. Bowditch. I maintained that it was a theory like any other teacher's doctrines. He was right and I was wrong. It was as much a theory as a merchant's balance sheet, and no more than that. I came to a better understanding of him after that conversation with his American pupil."

INFLUENZA AND BACTERIA.—We have the following facts which strongly suggest that influenza is an infectious disease:

1. Its appearance in epidemics; the manner in which it spreads from individual to individual.

2. The symptoms suggestive of some toxic influence.

3. Reduction of the general system and thereby induced susceptibility to disease.

4. A germ has been discovered which may be the cause of the disease.

—Jackson, *Boston M. and S. Journal.*

HEALTH IN TENNESSEE.—The principal diseases, named in the order of their greater prevalence, in the State for the month of July were: Typhoid fever, malarial fever, dysentery, diarrhœa, whooping cough, consumption, cholera infantum, pneumonia, scarlet fever, and tonsillitis. Typhoid fever was reported in the counties of Anderson, Blount, Bradley, Davidson, Decatur, Fentress, Giles, Grundy, Hamilton, Houston, Humphreys, Knox, Lauderdale, McMinn, Montgomery, Moore, Robertson, Rutherford, Shelby, Sullivan, Weakley, and Williamson; whooping-cough in Davidson, Giles, Humphreys, Maury, McNairy, Stewart, and Williamson; consumption in Davidson, Hamilton, Knox, Maury, Montgomery, Rutherford, and Shelby; scarlet fever in Bradley, Dyer, Madison, and Shelby; mumps in Anderson and McNairy; cerebro spinal meningitis in Rutherford.—*State Bulletin.*

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—A very full program is announced for the coming meeting of the American Electro Therapeutic Association, which is to be held in New York, at the Academy of Medicine, 17 West Forty-third street, October 4, 5 and 6.

There will be two interesting discussions; one upon "The Relative Fœticidal Value of the Different Currents and Their Application to Ectopic Gestation," to be discussed by many prominent gynecologists and electricians, and another upon "Cataphoresis and its Practical Application as a Therapeutic Measure."

Papers are announced by Drs. Geo. J. Engleman, Wellington Adams, and Geo. F. Hulbert, of St. Louis; Wm. F. Hutchinson, of Providence, R. I.; Franklin H. Martin, of Chicago, Ill.; A. Lapthorn Smith, of Montreal, Canada; R. J. Nunn, of Savannah, Ga.; Thomas W. Poole, of Lindsay, Ontario; C. Eugene Riggs, of St. Paul; W. J. Herdman, of Ann Arbor, Mich.; D. S. Campbell, of Detroit, Mich.; G. Betton Massey, of Philadelphia; Henry D. Fry, of Washington, D. C.; H. E. Hayd, of Buffalo, N. Y.; J. H. Kellogg, of Battle Creek, Mich.; C. G. Cannaday, of Roanoke, Va.; Ernest Wende, of Buffalo, N. Y.; and Wm. J. Morton, Augustin H. Goelet, A. D. Rockwell, Landon Carter Gray, Robert Newman, Ephraim Cutter, Frederick Peterson, G. M. Hammond, F. Van Raitz, of New York, and many others. Dr. J. Mount Bleyer will give an instructive lecture, with demonstrations, entitled, "The Phonograph and Microphonograph, the Principles Underlying Them and Their Uses in the Sciences."

In connection with the meeting there will be an exhibition of modern medical electrical apparatus, all the prominent manufacturers being represented.

The social part of the program includes many pleasant surprises.

CHICAGO DRAINAGE.—The cost of this important work, almost National in its scope and usefulness, has been tested at last prospectively by the bids received for doing the main part of the work. Main channel, $10,653,700. Sanitary commissions' direct expenditure in connection with this and for co-operative works, $6,800,000; total, $17,453,700. To this will be added salaries' expenses and interest of money during some years of construction. If the works are fully needed, and the routes, methods, and other particulars are judicious, and the money is spent honestly, as no doubt it will be, the advantages to the people of Chicago will be so great as to be beyond full estimation. The value of real estate will be largely and permanently increased, and the growing æsthetic tastes of the people will be greatly stimulated under the perfect guarantee of perpetual effective city sanitation unequaled on the globe.

—*Bankers' Monthly.*

ADULTERATION LAWS.—At the Indiana and again at the Illinois Associations, where the Paddock adulteration bill was up for discussion, the point was made that it would be a very dangerous measure in case the next Pharmacopœia should introduce standardized preparations of drugs. That, for example, under its provisions a specimen of fluid extract of cinchona might be obtained from a pharmacist, after hav-

ing been kept for some time on his shelves, when, no matter how carefully made, it might have precipitated and its alkaloidal strength upon analysis be found so much diminished as to render the pharmacist liable under the law. This argument appears very "fetching," and pharmacists generally were timid to favor any measure which might be used to work great hardship and injustice.

There are adulteration clauses in no less than twenty-nine pharmacy laws, under the provisions of which pharmacists are under exactly the condition complained of in the Paddock bill. These adulteration clauses have substantially the same provisions, that an article shall be deemed adulterated, in case it is officinal, if not in accord with the official requirements of the U. S. Pharmacopœia. Fluid extract of cinchona must show the presence of the variable limits of alkaloids as prescribed for the bark, just as much as that tincture of opium should contain morphine within the limits of not less than 10 per cent. Thus one by one the objections to the Paddock bill are shown to be only such as are offered either because of a lack of intelligence as to the status of legislation on this important question, or, what is more likely, simply for the purpose of defeating a measure which has for its object the improvement of medical preparations, by any method that appeals to prejudice or ignorance.

The letter used by the patent medicine men disclosed the origin and reason for these attacks in requesting every patent medicine man to work against the bill, as "it is only a stepping stone to legislation requiring that all patent medicines shall have the formulas published to the public."—*West. Drug.*

It would be a matter of surprise to us, were reputable druggists to object to the Paddock bill on the above grounds. We are under the impression that such men do not allow on their shelves fluid preparations that have become inert through time; and that they welcome a law that will compel every pharmacist to keep his drugs up to the standard strength, as every *reliable* pharmacist does without any law to compel him. If we are wrong, then it is assuredly to the interest of every citizen, whose health or life may depend on the quality of the drugs dispensed to him, to favor the Paddock bill, and every other measure that throws the safeguard of the law around articles of such vital importance.

WEEKLY Report of Interments in Philadelphia, from August 20 to August 27, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	4		Fever, scarlet		4
Alcoholism	2		" typhoid	9	3
Apoplexy	10		Hemorrhage	2	1
Asthma	2		Hernia	3	
Bright's disease	7		Inanition		21
Burns and scalds	2	4	Inflam'n brain	2	13
Cancer	10		" bronchi	2	5
Caries, spinal		1	" kidneys	7	
Casualties	11	2	" lungs	9	6
Cerebro-spinal meningitis		1	" pericard'm	2	
Congestion of the brain	1	5	" peritone'm	2	3
Colic		1	" s. & bowels	6	7
Cholera infantum		69	" heart	2	
" morbus	3	2	Marasmus		37
Cirrhosis of the liver	2		Measles		3
Consumption of the lungs	35	8	Obstruction of the bowels	2	
Consumption of the bowels	2		Old age	16	
Convulsions		18	Paralysis	4	1
Cyanosis		4	Poisoning	1	
Debility		4	Septicæmia		1
Diabetes	2		Softening of the brain	2	
Diarrhœa	3	3	Strangulation		1
Diphtheria		13	Stricture of œsophagus	1	
Disease of the heart	14	4	Suicide	2	
" " spine		1	Sunstroke	3	
" " liver	1		Teething		2
Drowned	3	2	Tetanus	1	1
Dropsy	1	4	Ulceration of the stomach	1	
Dysentery	7	1	Uræmia	3	
Effusion of the brain		1	Whooping-cough		6
Fever, malarial	1				
" puerperal	2		Total	209	263
" remittent	2				

A NEW YORK contemporary appears to have gotten into a sea of troubles. Leaving the straight and narrow path of medicine, it turned aside to give the city Health Board a whack; editorially charging the Board with collective and individual inefficiency, political management, etc. The *Evening Post*, presumably as well informed as newspapers generally, terms the editorial "an incredible piece of blundering." The President of the Board showed in a letter that the *Journal* was compelled to print, that the "information on which the article had been based was, in some important respects, erroneous," and the *Journal* published what the *Post* terms "an apology of the most humiliating sort," and declares that this was "extorted." We have not read the retraction in question, but as the *Mail and Express* is "astonished and mortified" to read it, we may infer that it was as abject as the circumstances appear to have demanded. In view of the vigor-

ous and successful grapple made by this Board with the typhus outbreak, one would think a really wide-awake editor would be slow to believe, much more to publish, any reflections upon its efficiency.

FRENCH science has to deal with a peculiar problem, how to prevent the depopulation of the country, which is now going on so rapidly that the deaths exceed the births by nearly forty thousand in a single year. Increasing the birth rate having proved impracticable, the present hope is to diminish the death rate. At a recent meeting of the new Society for the Protection of Children, Dr. Rochard referred to the fact that only eight years ago he was laughed at for predicting that the population would become stationary before the end of the century, and stated that two hundred and fifty thousand infants die yearly, of whom at least one hundred thousand could be saved by intelligent care. Stringent laws have been already passed to aid in preventing this great waste of life. It is now illegal for any person to give children under one year of age any solid food except on medical advice, and nurses are forbidden to use nursing bottles having rubber tubes. Efforts are being made also to induce Parisian mothers to nurse their own infants.—*Medit. Naturalist.*

Special Article.

TREATMENT OF ELECTRICAL INJURY FROM COMMERCIAL CURRENTS.

BY W. R. D. BLACKWOOD, M.D.,
PHILADELPHIA.

THE editor of the valued TIMES AND REGISTER has always been kind enough to put in anything written by the author no matter how closely together the articles came; hence, although I have had a letter in the last issue, I venture to say a little concerning injury from strong dynamo currents, my ideas being aroused into expression in type through the letter from Doctor McCann, of St. Paul, Minnesota, whose remarks precede mine on "Dry Cell Chloride of Silver Batteries," in the number of August 13.

Although I have been connected with companies and institutions using powerful currents for lighting and motor-power for several years past, and have had quite a good deal to do with the running of high energy currents, I have had but few accidents to happen to my associates, and but two to myself, each of the latter being not quite enough to kill me (hence this effusion), but all that I wanted in the way of experiment, experience, or illustration. The first which I looked into was through the mediumship of a powerful Leyden battery, which was discharged through me by the hands and arms because some one who had no business to charge it did so in my absence. Now, I try the apparatus always before touching it with a discharger, so there isn't any probability of my comparing another dose with the first. It is difficult to describe how I felt; I got a big voltage, with small quantity, and I was, for some instant (I don't know how long), in all parts of the world which I had ever visited, all at the same time; in short, I was omnipresent to these localities. There was none, or little pain; there was a sense of amazement more than anything else in the way of thought or feeling. The effect passed away in an hour or so, and no results have been felt that I know of in doing me any harm constitutionally. I did nothing for it in the shape of treatment.

The second dose was more expressive in every manner; I got a current from a wire feeding about five hundred incandescent lamps actuated by an arc dynamo, the value being about four amperes under seven hundred volts, the duration less than a second, so far as we could discover. Whilst coupling the leads to the split circuits in a dramatic production, which were required in a dark change of scene (the "Little Tycoon"), some one who had no business to touch the mechanism moved the main-switches to see the flash of contact at the points, and, fortunately for myself, he turned them back at once. I got the whole business anyhow for a perceptible time, and here there was very severe pain, both at the moment and for a long time thereafter. I didn't do any traveling this time; I lay right down, and was there without any foreign accompaniments; all the scenery I saw was lightning and General Knickerbocker's saloon, from the back view; I also saw some constellations, and with the funny ideas which dominate

dreams and make them infinitely ridiculous (I am fond of fun, especially at the theatre when we swap stories). I recollected the yarn about the man who was asked if he knew anything about astronomy, and who replied that "when I was a son of Mars I made some observations concerning Venus, and the result was that I had to take a course in Mercury for something like a year; that's all I know about planetary influences, and that's all I want to know by Jupiter, and don't you forget it!" It was curious that I felt the nearness of death and the sense of the ridiculous at the same instant. The experience assures me that my views in the direction of last illness convictions are correct, as concerning myself at any rate. I am not exactly orthodox in my conception of so-called religious matters, and people have often told me that I would change this at the time of transfer to the hereafter; no reply of mine being of weight in assuring them of the contrary. I have told these fervent folks that I have been in the face of apparently certain death more than once during the war, and did not then feel the terrors which they use as arguments in the efforts toward coercing big folks precisely as the nurse does with the little people at bedtime, when the "Bogie Man" is evoked. Anyhow, that's the way I was handled at the time referred to. The pain, as I have said, held on to me a long time, and was indescribable in its nature; it could not be accurately located; it felt as if it was right here, but on pressure or other test it was elsewhere. It was not continuous either, but was hard to get rid of. Anodynes did little; time did the work.

In the accidents from electric force, which I have treated the symptoms, aside from burning of the tissues, were those of pain and depression; the burns were treated as any other kind would be. Burns, it is known, from either galvanic action or dynamo currents, are very difficult to heal; I have had to use skin-grafting once in default of all else. The pain gave way to hypodermics of morphine and atropine, and the sinking feeling to ether and camphor, *i.e.*, Hoffman's anodyne with aqua camphora. I have noted a tendency to respiratory failure in bad cases, and for this I used atropine and cannabis indica with good result. Resultant fever, which sometimes was very high, I managed by the application of ice to the head and spine, or by cold bathing all over the body.

In some instances there was great depression after the main trouble was overcome—that is, after the immediate danger was over. I did not find any form of tonic useful here; time did more than medicine. This experience has also held good in a few cases in which electricity apparently injured the patient when used in a strong dose for tumor or such difficulty. I have urged care in the employment of strong currents in fibroids in several articles, because instances have come under my notice where due caution had not been taken by the operator, and in one instance in my own practice the current apparently injured the abdominal sympathetic, and the woman was miserable for a long time; she got well, however, under long and careful management. She had diarrhœa for eighteen months, which resisted any and all drugs—even that homœopathic humbug, arsenite of copper in the 3–1,000 doses. Whiskey and glycerine was better than all else for her, and it is good in any case of long-continued diarrhœa.

I have had some difficulty, in the shape of tremor, generally throughout the system following electric injury; I suffer from it myself frequently, and it is undoubtedly the result of the shock I was treated to so unceremoniously. Whether this is amenable to drugs or not I don't know; I have not tried anything for it yet in any case.

I don't like strychnine in shock from electric accident, as there seems to be a tendency anyhow to spasm, and, on the contrary, the bromides act nicely. In severe shocks the muscles are more or less torn by excessive contraction, hence strychnine would be contra-indicated. In those instances where I had an opportunity to see a post-mortem, there was considerable destruction of muscle fibre, and the blood was very fluid, and free from clot. This agrees with the results of experiments made toward showing the advantages of electrocution as a death penalty. Some remarkable escapes from fatal results under very powerful currents have happened; in one coming under my notice the man, whilst trimming the lamp, had a current of eight amperes driven by four thousand volts, a large part of which must have passed through his arms, chest, and spine; he was knocked off the pole, but,

aside from bad burns, he was not much the worse for the venture. To me, the possible explanation was that a great part of the energy traversed his clothing, as the day was wet, and his outer garments were very damp. Anyhow, he is still at the old job, but he takes somewhat more care in looking at things before taking good hold of them.

246 NORTH TWENTIETH STREET.

WORLD'S FAIR NOTES.

An exhibit of the Ice Age is being prepared in Ohio for the Exposition by Prof. I. F. Wright. He will collect boulders from different parts of the State, and with them fragments from the original ledges in Canada from which the Ohio boulders were brought by the ice; and specimens of scratched stones; exhibit a large glacial map of Ohio, an outline map showing the course the boulders have been brought, placard detailing the principal glacial facts, etc.

An optician of Baltimore, Md., has perfected an ingenious invention for cutting, grinding and polishing lenses. The original device will be exhibited at the Columbian Exposition. It will make 400 lenses at the same time. It consists of a saw and a number of metal discs, both flat and oval, in which the glass is secured by clamps, and which are kept in constant motion by means of a pulley and wheel operated by a motor.

William M. Singerly, of Philadelphia, will bring his big steer, the largest in the world, to the Columbian Exposition. The steer was sired by a pure bred Holstein, and its dam is a pure bred Durham cow. The animal is six years old and weighs 3,800 pounds. Its height is 5 feet 8 inches, its girth 10 feet 8 inches, its girth over loin 10 feet 10 inches, and its length from root of ear to rump 9 feet 10 inches. Mr. Singerly will exhibit his steer in the Live Stock Department.

Little Claude E. Cowen, less than two years old, son of Dr. N. H. Cowen, of Morgan Park, Illinois, sent 100 pennies as a donation to the children's home to be established by the Exposition. This is the first child's subscription.

University of the City of New York,

MEDICAL DEPARTMENT,

No. 410 East 26th Street,

Opp. Bellevue Hospital,

NEW YORK CITY.

FIFTY-SECOND YEAR, 1892–93.

The Collegiate Year consists of a SPRING TERM, which begins March 30, 1892, and ends June 1, 1892; and a WINTER TERM, which begins Wednesday, September 28, 1892, and ends March 31, 1893. An obligatory three years' graded course has recently been established.

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The THIRD YEAR comprises lectures in the practical branches, clinics in general and special subjects, and instructions by Sections at the bedside in the wards of Bellevue Hospital, and attendance upon obstetric cases in out-door practice.

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—FEES.—

For Course of Lectures	$150 00
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Demonstrator's Fee, including material for dissection	10 00
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For further particulars and circulars address the Dean,

PROF. CHAS. INSLEE PARDEE, M.D.,

UNIVERSITY MEDICAL COLLEGE,

410 East 26th Street,

New York City.

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PAGE

ORIGINAL ARTICLES:

OUTLINES OF THE HISTORY OF MALIGNANT OR ASIATIC CHOLERA IN NEW ORLEANS, LOUISIANA. By Joseph Jones, M.D., L.L.D. - - - - - 295

CHOLERA. By Louis Lewis, M.D. - - - - - 297

THE ACID PREVENTION OF CHOLERA. By S. V. Clevenger, M.D. - - - - - - - - - - - - - 298

EDITORIAL:

A DANGEROUS SUGGESTION IN THE TREATMENT OF CHOLERA - - - - - - - - - - - - - - 299

MEANS OF PREVENTING THE INVASION OF CHOLERA - - - - - - - - - - - - - - - - 300

RAGS! - - - - - - - - - - - - - - - - - - 300

PAGE

ANNOTATIONS:

In Time of Peace, Prepare for War - - - - - - - 301

Clam Juice - - - - - - - - - - - - - - - - - 301

THE MEDICAL DIGEST:

Treatment of Asiatic Cholera—Dosimetric Treatment of Cholera (*Waugh and Burggræve*) - - 301–307

MEDICAL NEWS AND MISCELLANY:

Our Polyglot Rules - - - - - - - - - - - - - 308

MEDICAL CORPS, U. S. NAVY - - - - - - - - 318

NOTES AND ITEMS - - - - - - - - - - iv, x, xii

Original Articles.

OUTLINES OF THE HISTORY OF MALIGNANT OR ASIATIC CHOLERA IN NEW ORLEANS, LOUISIANA.

By JOSEPH JONES, M.D., LL.D.,

Professor of Chemistry and Clinical Medicine Tulane University of Louisiana.

MALIGNANT ASIATIC CHOLERA.

It would be foreign to our purpose to enter fully into the history of this foreign pestilence, which has, at various times, reached the shores of Louisiana from the cities of Europe, across the waters of the Atlantic ocean and the Gulf of Mexico. Asiatic cholera has played no insignificant part in the grand carnival of disease and death.

In 1832 Asiatic cholera, in conjunction with yellow fever, swelled the mortality of New Orleans to 8,099, in a population of 55,084, and marked this year as the most terrible in the annals of this city, the death rate reaching the enormous proportions of 147.10 per 1,000 inhabitants. In 1832 the inhabitants of New Orleans were more than decimated, for more than one-seventh of their number was destroyed chiefly by Asiatic cholera and yellow fever, acting in addition to the usual endemic and epidemic diseases.

The Charity Hospital affords the following statistics of Asiatic cholera:

YEARS.	CASES.	DEATHS.
1848	662	396
1849	1,813	1,122
1850	724	530
1851	382	292
1852	485	358
1853	194	115
1854	478	352
1855	351	225
1856	32	11
1857	1	1

Total (1842–1860, eighteen years) cases 5,122; deaths, 3,402; per cent. of deaths, 66.4. During the sixteen years following the American civil war, New Orleans has

been comparatively exempt from Asiatic cholera, as shown by the statistics of the Charity Hospital; thus in

YEARS.	CASES.	DEATHS.
1866	300	237
1867	94	70
1868	15	9
1873	34	27

Total cases, 443; deaths, 343, during sixteen years (1864–1880); per cent. of deaths, 77.4.

There were received into the Charity Hospital during thirty-eight years (1842–1880), 5,565 cases of Asiatic cholera, of which 3,745 terminated fatally, giving a rate of mortality of 67.3 per cent. The first authentic records which we have of the appearance of Asiatic cholera in New Orleans, relate to the year 1832, when it occasioned 4,340 deaths out of a total of 8,090 deaths from all causes; yellow fever claimed only 400 deaths in this most pestilential year in the annals of this city. The disease lingered through 1833, when it claimed 1,000 victims out of a total of 4,976 deaths. In 1832 the population of New Orleans was 55,084, and of this number more than one-seventh perished, giving a mortality from all causes of 147.10 per 1,000 inhabitants; and from Asiatic cholera, 78.78; and from yellow fever, 7.20. Cholera appeared again in 1848, and destroyed 1,646 inhabitants, and continued its ravages for several years, the deaths being 1849, 3,176; 1850, 1,448; 1851, 430; 1852, 1,329; 1853, 585; 1855, 883; 1856, 43; 1857, 24; 1858, 26; 1859, 27; 1860, 30; 1861, 12; 1863, 4; 1864, 5; 1865, 9; total deaths from Asiatic cholera during a period of twenty-one years (1844–1865), 9,678. Cholera appeared again in 1866, and continued its effects for three years. The deaths were as follows: 1866, 1,294; 1867, 581; 1868, 129; 1869, 4; 1870, 3; 1871, 6; 1873, 142; 1874, 6; 1875, 4; total deaths during fifteen years (1866–1880), 2,169.

It is evident from the preceding statistics, that during a period of thirty-six years (1844–1880), Asiatic cholera destroyed 11,847 of the citizens of New Orleans; and if we add to this number the deaths occasioned by this disease in 1832 and 1833, we have a grand total of 17,187 deaths.

Those charged with the conduct of the sanitary affairs of the city and State should view these 17,187 dead citizens as victims to a foreign or exotic pestilence, imported from the shores of Europe in the cargoes and passengers of ships.

The State of Louisiana can protect herself and the entire valley only by maintaining, at all times, and under all circumstances, a vigilant quarantine at the mouth of the Mississippi river; and all parties who, under the guise of promoting commerce, endeavor to destroy an efficent quarantine, should be regarded as public enemies. It is probable that the mortality occasioned by Asiatic cholera was even far in excess of these figures, for we find upon careful examination of the mortuary records of New Orleans, that during a period of thirty-six years (1844–1880), the deaths from bowel affections were as follows: Cholera morbus, 889; cholera infantum, 2,408; teething, 3,430; gastritis, 743; enteritis, 6,915; dysentery, 7,097; diarrhœa, 8,289; total from these diseases, 29,771. During this same period of thirty-six years yellow fever occasioned 28,739 deaths.

It is evident, therefore, that the so-called ordinary bowel effections, diarrhœa, dysentery, cholera morbus, enteritis, gastritis and teething, actually caused a larger number of deaths in New Orleans than yellow fever, and if we add the 11,847 deaths caused by Asiatic cholera, we have a grand total of 41,618 deaths from those diseases in which derangements of the gastro-intestinal mucous membrane form the most prominent symptom.

The continuous and fearful mortality from this class of diseases, must be diminished by improved domestic and general sanitation. The great essentials of sanitary reform for the diminution of the number and fatality of the cases of bowel affections in New Orleans must be based upon:

1. Thorough drainage of the parish of Orleans, and especially that portion occupied by the city of New Orleans.

2. The prompt removal of all fœcal matters out of the limits of the city.

3. The daily removal of garbage.

4. Systematic and thorough cleaning of private premises, public buildings, factories, markets, streets and gutters; the filling up with sand and gravel of all low lots.

5. The supply of pure filtered rain water in abundance to all the inhabitants of New Orleans, at the lowest cost.

6. Daily inspection of markets, milk, meats, fish, fruits, and all farm supplies.

156 WASHINGTON AVENUE, NEW ORLEANS.

CHOLERA.

By LOUIS LEWIS, M.D.

THE germs of cholera are eliminated through the bowels, the skin, and the lungs, and through one or more of these channels they may also enter the body. The profuse evacuations indicate that the intestines are one channel of exit, and the fact that the disease may be induced by consuming liquid or solid food containing cholera evacuations, points to the same as a medium of entrance. Again, the copious sweating marks the skin as another medium of exit, while the propagation of cholera by handling infected clothing and bedding also shows it to be a channel of entrance. Moreover, the germs may be wafted into the air, and enter the system through the lungs, or pass into the stomach and bowels through the agency of the saliva. Impure air, defective drainage, and bad water, are notorious media through which the disease is communicable.

In true Asiatic cholera (or "morbus oryzens"), the countenance assumes a dusky hue, with sunken eyes, surrounded by dark areoles, and the features are pinched and "drawn." These appearances are so unmistakable that it is a frequent occurrence in India for the army surgeon to call a man out of the ranks at parade and send him to hospital quarters before he even knows that he is sick. Giddiness, sinking at the epigastrium, prostration and vomiting usher in the more urgent symptoms, and intense thirst, colicky pains, with painless evacuations of "rice-water" stools, cramps of the abdomen and extremities, and cold perspirations lead to collapse, or the algide stage. The temperature has now fallen (to rise again after death); the mouth and tongue become cold; the body emits a mouldy odor; the urine at first contains sugar, but is soon suppressed with the other secretions; the voice becomes inaudible; the pulse can scarcely be felt; the whole surface is congested and discolored, and stupor and coma end the scene. In favorable cases the secretions are re-established, and albumen appears in the urine during convalescence.

The above are the symptoms, with more or less variations, of a typical case of true cholera. Sometimes very virulent epidemics occur in which the usual symptoms are wanting; the body becomes suddenly livid and convulsed, and the patient dies in a few minutes. Such an outbreak happened at Golwood, India, in 1876, and more than half the population were dead in three days. In these virulent cases the patient dies before diarrhœa has commenced, but there is usually vomiting of a greenish paint-like fluid. Post mortem, the right heart is found to be gorged with blood, the left side almost empty.

Many drugs have been vainly tried in the treatment of cholera; calomel, arsenic, phosphorus, bromides, strychnine, iron, tannin, camphor, and others. Free bleeding, purging, and emesis were once in vogue; the latter, especially emetics of chloride of sodium, were much employed some sixty years ago; and to-day the same salt is recommended, in the form of frequent injections of tepid sea-water. In the preliminary diarrhœa that usually warns us of impending cholera, diluted sulphuric acid is very useful, half a drachm in half a tumblerful of gaseous lemonade, taken three or four times a day; or five to ten minims of glycerate of carbolic acid, in water, every few hours. Small repeated doses of Dover's powder often do good service, or equal parts of Dover's powder and hydrargyrum cum creta. When the disease has quite alarmingly developed, subcutaneous injections of morphine and atropine combined seem to have given the best promise so far; but nothing seems of much avail, and our most useful energies are called in the direction of prevention. Here so much may now be done that was without our ken in the older epidemics, that a serious outbreak would have to be largely ascribed to municipal neglect. As to personal precautions, we should advise timid persons to have their water and milk well boiled for half an hour; to beware of fruit, ice-cream, ice, and raw or under-cooked vegetables; and to maintain a healthy and free action of the skin, bowels, and liver. With such measures, and avoidance of needless panic, there would be little cause to worry about the cholera.

NEW clothes possess no immunity against disease, especially if the garments are made up in the Russian Jew sweating houses. Should cholera come, it will be safe, and doubtless fashionable, to wear old clothes for a long time after the epidemic has passed away.

THE ACID PREVENTION OF CHOLERA.

By S. V. CLEVENGER, M.D.

THE Secretary of the Illinois State Board of Health, in a recent publication, called attention to the fact that sulphuric and sulphurous acids had been successfully used in epidemics prior to Koch's discovery of the comma bacillus, and to his claim that it could be cultivated in alkaline media, and that acids killed it.

Niemeyer's description of the pathological anatomy of the intestinal tract in cholera, appears to bear favorably upon the acid theory of prevention.

In the 1879 translation of the eighth edition, Vol. II., page 648, *et sequitur*, Niemeyer says:

"The relaxed, baggy, small intestine has a peculiar, rosy appearance even before it is opened, *while the large intestine preserves its natural color.* . . . The mucous membrane of the small intestine is finely injected, *especially near the valve, and growing less as we pass upwards.* . . . As a rule, also, *the solitary and Peyer's glands are swollen and distended.* . . . . *The large intestine does not show any constant changes, and there is but little alteration in the jejunum.*"

In Halliburton's recent "Text Book of Chemical Physiology and Pathology," London. 1891, page 652, is the statement that "The intestinal contents become alkaline about ten or twelve inches from the pylorus, and then pancreatic digestion begins. . . . . The reaction of the intestinal contents remains alkaline *until the large intestine is reached;* fermentative processes have, by this time, produced sufficient lactic, butyric, and similar acids to more than neutralize the alkalinity of the juices. This acidity stops the digestive action of the pancreatic juice."

I have italicized parts of the quotations which indicate that such portions of the alimentary canal as are farthest from the normally acid stomach, and possess the maximum of alkalinity, appear to be the places in which the disease exerts its greatest changes, the acid colon escaping, and it is in the lower small intestine that the main putrefactive processes occur and organisms abound.

In this connection, the following suggestions may interest physicians to consider:

1. There will be found variability of toleration of acids between individuals.

2. Some interference with normal intestinal digestion must be induced by over acidulation.

3. May not other acids than the sulphuric answer as well?

4. Does gout and rheumatism confer immunity?

5. Would it not be well for drinkers to substitute sour wines for other kinds of liquors?

6. Too much reliance must not be placed upon any single means of prevention.

70 STATE STREET, CHICAGO.

PROFESSOR CUNNINGHAM, Physiologist of the Army Medical School at Nettey, has been granted two years more to complete his observations on cholera.

DR. SHAKESPEARE'S conclusions in regard to Ferran's preventive inoculation for cholera were quite favorable to the Spanish *savant.* He inoculated 30,491 persons out of a total population of 104,561, in twenty-two towns where cholera prevailed. Those not inoculated died of cholera at the rate of 33.58 per 1,000. Of those who were inoculated the death rate from cholera was 3.41. Commenting on these reports Dr. Shakespeare says: "There is no slight ground for the belief that subcutaneous inoculations into man of pure cultures of the comma bacillus of Koch, whilst they do not usually excite disturbances which in any way resemble Asiatic cholera, apparently exercise a certain protective influence through the establishment of a considerable degree of immunity from attack and death by cholera. The secondary claim of Ferran that the anti-choleraic inoculations constitute a means of protection of communities from serious invasions of cholera, as well as a means of rapidly terminating a local epidemic already raging, without recourse to the universally hated measures restricting personal liberty, or to the imposition of damaging restraints upon trade and commercial intercourse, has in its support the same amount and class of testimony." The cholera vaccine is a pure culture of the comma bacillus in bouillon. Of this, fifteen minims are injected into each arm, the whole being carried out under the strictest antiseptic precautions.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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A DANGEROUS SUGGESTION IN THE TREATMENT OF CHOLERA.

REFERENCE has been made to Dr. George Johnson and his treatment by castor oil. As this suggestion has again been brought forward, we will give the views of those who have put it to practical proof. Fergus, of Glasgow, calls attention to the preliminary diarrhœa, perhaps consisting only in a painless, agreeable relaxation. This is the only stage at which opium is to be given, and then in a full dose, with a stimulant, when it is of the highest value. It is only to be given if the stools are still bilious, pulse fair, and skin warm. Macpherson and Macnamara, from an extensive experience in India, declare that at the proper stage, no remedy is so effectual as opium, and it may be safely trusted to cure the premonitory diarrhœa of cholera. Twining and Parkes confirm this view. Gubler says it calms the brain, relieves epigastric constriction, checks mucous flux, favors perspiration, and assists stimulants, astringents, carminatives, or absorbents. The following pill is recommended by Aitken:

℞.—Pulv. opii..... gr. xii.
Camphoræ..... gr.xxx.
Pulv. capsici..... gr. ix.
Alcohol..... q. s.
Conserv. rosæ..... q. s.
M. et in pil. No. xii div.

The dose of opium is to be repeated if another loose stool occurs.

Macnamara says: "No more erroneous practice can possibly exist than that of allowing [choleraic] diarrhœa to go on, upon the supposition that the attack is a bilious one, and that the purging is salutary or harmless. More deaths from cholera have been occasioned from this than from any other mistaken notion on this subject."

Dr. George Johnson believes choleraic diarrhœa to be due to noxious secretions poured from the blood into the bowels, and recommends elimination by castor oil. Fergus says: "If this advice is followed during an epidemic of cholera, the consequences may be very serious. It is well-known that during an epidemic there is a general tendency to relaxation of the bowels, and that they become very susceptible to the smallest dose of even the mildest medicine. Any one who has had much to do with cholera must have frequently met with cases which appeared to be the direct result or consequence of a slight dose of medicine. The risk is that the castor oil or rhubarb would drive most of the cases into the second stage of cholera, when opiates and astringents would increase the danger immensely."

Macnamara says: "I caught some of Johnson's enthusiasm, and came out to India full of confidence and hope in castor oil. I went boldly to work with castor oil, *but it absolutely and completely failed; the mortality from the disease was fearful.* I have since, on several occasions, tried castor oil in cholera, but have finally abandoned it, having never seen any benefit arise from its use." He goes on to say that in the second stage, with profuse stools, these should, if possible, be rendered acid, for which he uses the following:

℞.—Acid. sulphurici dilut.,
Acid. acetici dilut.....āā ♏xv.
Acid. carbolici..... gtt. ss.
Aquæ..... f℥jss.
M. S.—Give every half hour for four hours, then every hour, adding opium to first and second dose, if advisable.

Thus it will be seen that practical experience has led this sagacious observer to antedate later bacteriological studies, that have proved acids to be destructive to the cholera bacillus, while the theoretical basis of the castor oil or eliminant treatment, flimsy at the best, has completely broken down under the clinical test. Notwithstanding this, the last number of the *Hospital Gazette* contains an item reiterating Dr. George Johnson's suggestion, and recommending its adoption. Such advice, at the outset of a cholera epidemic, is calculated to do immense harm.

MEANS OF PREVENTING THE INVASION OF CHOLERA.

THINGS move so rapidly nowadays, that the suggestions made at the time of writing, one week before the appearance of this number of THE TIMES AND REGISTER, may be rendered obsolete by the time our readers receive their copies. The action of the President in establishing a quarantine of twenty days on immigrants, has met with general approbation, excepting with the steamship companies. Indeed, divers individuals who are not in politics, and hence have not the fate of the Know-Nothing to dread, have expressed the fervent opinion that the quarantine could be extended to fifty years without serious detriment to the country. In the meantime, immigrants are compelled to take a circuitous route through Canada or Mexico, and smuggle themselves across the border, to reach this land of promise. This is productive of good; as it increases the length of time they are absent from the cholera regions before they enter our country, and also lessens the possibilities of carrying with them baggage, possibly infected. Any one witnessing the debarkation of immigrants of the lower grades, will hardly fail to be impressed with the absurdity of their carrying thousands of miles the worthless trumpery constituting their effects. Very little loss and much good would result, were the immigrant to pass to our shores through a region of soap and hot water, leaving his exuviæ behind him to be cast into the flames; while he emerges into the land of the free a new man; American, from the skin outward, and all his old belongings cast off with his allegiance. Would not this create in his mind a sense of regeneration, and arouse an opposition to Cahenslyism?

RAGS!

THE Secretary of the Treasury has forbidden the importation of rags from any foreign port, unless accompanied by a consular certificates of disinfection. Also, rags gathered in or shipped from any cholera-stricken port are absolutely denied entry.

This will compel foreign dealers in rags gathered in Hamburg and other cholera centers to ascertain what Consul makes the lowest charges for his certificate, and to ship their rags from healthy ports. That none of our Consuls would prove venal in so vital a matter we admit at once. But the success of the rule presupposes that every single Consul is capable of efficiently directing the disinfection of rags, and that every last man of them will prove fully alive to its importance, and will personally see that every solitary rag is thoroughly and completely disinfected. The probability of these conditions being realized may be doubted. At the New York Health Office, a curious incident occurred. An infected blanket had been hanging out in the snow and rain, and when brought to the office to be disinfected, the blanket was folded up and placed in the hot air receptacle. After some hours the blanket was removed, unfolded, and in the center was a large piece of ice! Evidently, the fumigation would not have destroyed septic germs. Under these circumstances, it is not necessary to show that former epidemics have been caused by rags. It is perfectly well-known that the greatest

danger is found in clothes contaminated by choleraic vomit or stools, and that the germs will retain their vitality for an indefinite period in such a habitat.

Rags! Gathered from the hovels of the poor, from the dump-heaps, garbage and ash receptacles. Old bandages and rags used for the sick, who are too poor even to lose the trifle paid for them by the ragman. Rags from cholera, typhus, smallpox or diphtheria! What disinfection could remove from such materials all possibilities of danger? No article of import is so dangerous in ordinary times, and when cholera prevails, the importation of rags should not be allowed under any circumstances. Disinfection may disinfect, but apply the personal equation to our health officers, appointed for political reasons, over our widely extended boundary line, and reflect that one solitary instance of carelessness, allowing the pest to enter, is sure to be followed by its extension through the country. We believe that in asking the total prohibition of the importation of rags, we are voicing the universal sentiment of the public.

Annotations.

IN TIME OF PEACE, PREPARE FOR WAR.

SHOULD cholera appear in Philadelphia, I shall assuredly employ the drug that has done me such good service in cholera infantum—the sulpho carbolate of zinc. I shall employ it as a prophylactic, giving an Upjohn 2½ grain pill three times a day, to be sucked like a lozenge until the taste becomes quite strong, and then swallowed. All drinks to be acidulated with citric, phosphoric or hydrochloric acid.

For the preliminary diarrhœa, I propose to give the sulpho carbolate, two and one-half grains every hour or two, with a full dose of chlorodyne, or a similar mixture of opium, camphor and chloroform. For sudden choleraic attacks, the powerful Indian stimulant formula mentioned in the digest of treatment.

In the later stages, baths, subcutaneous or intravenous injections of saline solutions, and lactic acid internally.

For collapse, hot baths, hypodermics of alcohol, ether and strychnine.

Diet, the raw white of egg, in ice-water, pepsinized milk (junket), Mosquera's beef meal, Bovinine, and koumiss, by the mouth or by the rectum.

Salol, beta-naphthol, copper arsenite, naphthalin, betol, thymol, eucalyptol, creasote and resorcin, form a list of remedies to be held in reserve, and tried in case those preferred do not answer expectations. Peroxide of hydrogen may prove our chief reliance before the year closes. It certainly should not be neglected, as a prophylactic or a remedy.—*W. F. Waugh.*

AS a food likely to be retained on the stomach, clam juice deserves a trial. It has remarkable virtues in cancer and other diseases of the stomach, attended with irritability. It is possible that in cholera it may prove of like value. Burnham's clam juice in bottles may be procured at any drug store; and a Philadelphia firm puts up a superior article in cans. It may be used in hot water, hot milk, or frozen.

The Medical Digest.

TREATMENT OF ASIATIC CHOLERA.—*Lebert* says that while rest, caution in diet, small meals of light animal food, red wine, and flannel abdominal bandages are all useful, opium is the one real remedy in cholera diarrhœa, especially in the worse forms. All sorts of combinations may be made so that they contain opium.

℞.—Argenti nitrat ..... gr. ix.
Solve in aquæ dest. q. s. et adde:
Ext. opii ..... gr. ivss.
Pulv. altheæ ..... gr. xxij.
Ext. gentianæ, q.s.
M. Ft. mas, et in pil. xxx dividenda.
S.—One pill three times a day in light cases, two pills in severe cases.

If the stools occur in rapid succession, he gives two or three pills every hour until the diarrhœa yields. After it ceases, a pill is to be taken every evening for some days. In more obstinate cases he gives one-third grain of opium with three grains of tannin or eight of bismuth; and assists these remedies with enemas of one and a half to three grains of nitrate of silver and ten to fifteen drops of laudanum in three ounces of water. If this be quickly passed a second is given shortly; in urgent cases two enemas are

given in a day. In case great danger threatens, he gives fifteen to twenty drops of laudanum at once. In cases of great nervous distress and anxiety he uses equal parts of the tinctures of opium and of camphor, in doses of six to ten drops. For the pains and colic he gives warm chamomile tea (matricaria), and puts the patient to bed, with hot poultices or cold compresses to the abdomen. If the diarrhœa returns, the patient should change his location. In such cases, if opium fails, mild laxatives have succeeded, but such cases are exceptional. When nausea, vomiting, or bitter taste exists from the first, they are met with effervescing powders, ice, aërated drinks, and if these fail, an emetic of fifteen to twenty grains of ipecac.

In well-marked cholera the foregoing remedies are useless. Keep the patient composed, give small pellets of ice every three minutes, and mouthfuls of very cold soda water, or small soda powders in a little ice-water. Soda lemonade is very useful.

Hypodermics of morphine, gr. $\frac{1}{6}$ to $\frac{1}{4}$, allay the pains and cramps of the second half of the attack. Internal medicines are useless, and enemas will not be retained. Frictions, with pure chloroform or counter-irritants, are useful. When the stools become less frequent, enemas of laudanum, twenty drops, and eight or ten drops of the strong solution of chloride of iron (Br. Ph.), or four grains of nitrate of silver may be given. If diarrhœa be still present at the end of the attack, five to eight drops of laudanum may be repeatedly given.

Hygienic management must be secured throughout the attack. Precordial anxiety is best relieved by compresses over the abdomen; later, by mustard, etc.

Venous injections are useless and dangerous. Stimulants at this stage have been abused. We cannot force reaction if the strength is unequal to it. If the temperature fall, frictions of the extremities should be instituted, with flannels and stimulating liniments; and hydropathic wraps, warm jugs to the hands and feet, warm aromatic drinks, and ammonia, may be used.

℞.—Ol. anis..... f℥j.
Alcohol..... f℥iij.
Solve et adde,
Aq. ammoniæ..... f℥v.
M.—S. Ten to fifteen drops to be added to every cup of tea.

In very grave and rapidly sinking cases, a teaspoonful or so of old, fiery wine, Burgundy, Tokay or Rhenish, should be given every half hour, with thirty drops of the ammoniated tincture of musk.

Fullness and pain in the head calls for cold compresses to the head and mustard to the legs.

Stomach symptoms in this stage demand the same remedies as in the first.

The greatest caution is to be observed in giving food. A spoonful of good beef soup every three hours, and when reaction follows, tea or coffee with equal parts of milk, may be given. Only animal food should be given, simply prepared, and not even that till the tongue is clean and intestinal catarrh ceases. In the typhoid stage our chief duty is to regulate digestion. Ice and aërated waters are needed for gastric distress, followed by the bitters, with rhubarb. Constipation requires rhubarb, and perhaps aloes. For abdominal pains we give enemas of ether, f℥ ij, in four ounces of water. Warm aromatic herb-baths are useful. The diet may be enriched only when the digestive organs have become perfectly normal.

Brown-Séquard states that hypodermics of morphine at the outset will prevent cholera.

A. L. Loomis recommends iced brandy or champagne, given repeatedly in small doses, as the best stimulants in collapse. Inhalations of amyl have also been found efficient in the advanced stages. If death threaten, whiskey may be injected hypodermically, or milk be introduced into the veins. Cerebral symptoms are treated by applying ice to the head and administering bromides.

N. S. Davis says that the first object to be accomplished by treatment is to restore the tonicity of the tissues, increase the vasomotor influence, and lessen the mucus irritability in the early stages. Failing in this, the object is to limit the loss of serum, prevent thickening of the blood, and maintain secretion and elimination in activity. Later, the most pressing need is to dilute the thickened blood, and maintain the action of the nervous centers of organic life. Finally, in the stage of reaction we must combat the inflammation and sustain nutrition.

For the preliminary diarrhœa he gives:

℞.—Acid. sulph. aromat..... f℥iv.
Magnesiæ sulph..... f℥iv.
Tinct. opii..... f℥iv.
Elix. simp..... f℥j.
Aquæ..... f℥ij.
M.—S. f℥j, in a little water every three to six hours.

The dose is repeated every three hours, until the passages have been prevented for twenty-four hours, and then increase the interval until they occur once daily, of natural color and consistence.

If malaria be present, or the stools light colored, he adds to the above two grains of quinine and one of calomel, twice daily.

When active symptoms begin, he applies mustard over the stomach and spine, keeps the patient lying down with dry warmth to the extremities, and gives every half hour $\frac{1}{20}$ gr. strychnine and 10 minims of oil of turpentine, in emulsion. After each act of vomiting he gives morphine, gr. ¼, and calomel, gr. j, with a pellet of ice instead of any drink. He lays great stress upon giving this immediately after the vomiting; as if the patient be allowed to "rest a little" before taking the dose, the stomach will have regained some of its contractility, and some effused serum will have accumulated. At the same time he gives by the rectum 10 grs. of acetate of lead, and ½ gr. of acetate of morphine, dissolved in two ounces of water. In the epidemic of 1866 he used this mixture in many cases instead of the calomel and morphine powder:

℞.—Acid carbolici..... gr.iij.
Glycerinæ..... f℥ijss.
Tinct. opii camph..... f℥j.
Aq. cinnam..... f℥jss.
M.—S. f℥j after each vomiting.

In the early stages the patients are to be kept constantly in the recumbent position, the thirst relieved by pellets of ice, held in the mouth until smooth and then swallowed.

If the surface becomes shrunken, feet bluish, pulse feeble, and sweating copious, it is better to give at once a hypodermic of morphine, gr. $\frac{1}{6}$, and atropine, gr. $\frac{1}{60}$; and every fifteen minutes a tablespoonful of strong coffee or tea, alternated with the same quantity of well-salted broth.

If the hypodermic be insufficient, it may be repeated in half an hour to an hour. Dry warmth to the surface and extremities, with the horizontal posture, must be maintained throughout this stage. Wet applications reduce the heat and do harm thereby.

Frictions do more harm than good. Cramped muscles may be held in a firm grasp till they relax. Advantage has been derived from applying several times to the whole surface dilute mercurial ointment, with a liberal addition of powdered camphor and capsicum. If collapse ensue, the small chance of recovery is best promoted by rest in bed and the continued use of tea, coffee, and salt broth, as above. When reaction sets in, the treatment is the same as in the second stage of typhoid fever, which see.

The free use of alcohol and heroic dosage are only productive of harm.

Milner Fothergill mentions approvingly the suggestion of Dr. Hall, who, basing his practice on the spasm of the arterioles, which cuts off the blood from the Malpighian corpuscles and stops the secretion of urine, gives hypodermics of chloral with satisfactory results.

Niemeyer says that as soon as persons are attacked by diarrhœa they should go to bed, send for a physician, and drink a few cups of hot coffee or peppermint tea, and take some "cholera drops." It cannot be denied that energetic diaphoresis occasionally averts an attack. This sweating must not be arrested too soon, and the patient must not be allowed to leave his bed until he has passed a formed stool.

Near the end of an epidemic, when the fatality becomes less, the "specifics" win a reputation which they are certain to lose during the first weeks of the next visitation.

For cholera diarrhœa he gives Dover's powder, five grains, repeated often till a formed stool is passed.

If the patient grows worse, opium is contra-indicated; and then he recommends cold compresses to the abdomen, and calomel, a grain every hour. The loss of fluid is obviated best by giving small pieces of ice, or a little ice water, at short intervals.

Collapse calls for stimulants; the best of all being iced champagne, or rum. Sometimes it is well to alternate with hot coffee.

Frictions relieve the cramps of the muscles. Sinapisms are useless at the time, and cause painful sores later. Solid food should not be allowed till pulpy stools appear.

Roberts recommends opium with acetate of lead, tannic, gallic or dilute sulphuric acid.

Bartholow strongly recommends for the cramps:

℞.—Chloral hydrat..... ʒiij.
Morphine sulph..... gr. iv.
Aquæ lauro-cerasi..... fʒj.
M.—S. 15 to 30 minims to be injected hypodermically.

Ely McClellan strongly urges the use of sulphate of iron and sulphuric acid as prophylactics. He states that the mortality among patients treated with acids was only 8 per cent., while the lowest rate when other remedies were used was 23 per cent., and the highest 59 per cent.

W. Stevens gave a seidlitz powder at the start, and the following when the algid stage supervened:

℞.—Sodii chlorid..... ʒij.
Sodii carbonat..... ʒij.
Potassæ chlorat..... ℈ij.
Aquæ..... fʒvj.
M.—S. fʒj in water every half hour.

W. Sedgwick thought that phosphoric acid checked the disease more certainly than sulphuric acid.

George Johnson recommended castor oil at the beginning. We only mention this treatment to warn the reader against it. A full trial was given to it in India, and the deadly results induced the physicians there to lay down the rule: Never to give laxatives in any case of choleraic diarrhœa. Unfortunately, this dangerous mode of treating cholera, founded on theory and damned by trial, is continually being brought forward, especially since the discovery of the comma bacillus has given its supporters another fallacious theory for its employment—that of clearing the germs out of the bowels by purgation.

J. Murray, of the Indian Medical Service, recommends as a laxative:

℞.—Pulv. opii..... gr. j.
Piperis..... gr. ij.
Asafœtidæ..... gr. iij.
M. S.—At one dose, in pill.

There cannot be much purgative action in this, and it would be safer than castor oil, if circumstances should render aperient medication necessary. Camphor is sometimes added.

Squibb's diarrhœa mixture is a useful household remedy for cholera seasons:

℞.—Tinct. opii depurat.,
Tinct. camphoræ,
Tinct. capsici.....āā fʒj.
Chloroform. purif..... fʒiij.
Alcohol (95 per cent.)..... q. s. ad fʒv.
M. S.—Adult dose, a teaspoonful.

For the preliminary diarrhœa, *Da Costa* recommends sulphuric acid, opium, and acetate of lead. If the discharges are not controlled by these remedies, he gives:

℞.—Tinct. capsici..... gtt. ij.
Tinct. opii..... gtt. x.
Aquæ camphoræ..... fʒj.
M. S.—Take every two or three hours.

If the stomach does not tolerate opium, give morphine hypodermically.

When true cholera develops, with cramps, vomiting and purging, restrict the use of drinks, and give pellets of ice with small doses of stimulants.

Keep the patient at rest.

Use frictions for the cramps; if not relieved, give twenty grains of chloral hypodermically over the abdomen, and apply a mustard plaster. These means will arrest the cramps and vomiting.

When reaction begins, be sure to look to the kidneys. If vomiting has ceased, allow fluids in large quantities. Act upon the skin with diaphoretics.

If reaction be not taking place satisfactorily, give five to ten grains of calomel, and follow with half a grain every hour.

If collapse be impending, persist with frictions, hot fermentations, mustard, turpentine, whiskey, etc.

If the patient be not too weak, a hot bath will be very beneficial. The use of hot applications is our best treatment. Give stimulants as long as they will be retained in this stage. They should also be given hypodermically. Caffeine, in doses of one grain and a half, has been used with benefit as a cardiac stimulant. If the patient continues to sink, and the blood becomes very thick, intravenous injections of fluids may be of benefit.

℞.—Sodii chlor..... ʒj.
Sodii carb..... ʒij.
Aquæ..... Ovj.
M.—Heat to 108°. Inject two fluidounces at once into a vein, and repeat until forty ounces have been injected.

There is a popular expression in India, to the effect that if at the beginning of the disease a dose can be administered which will bring the tears to the eyes, the attack will be averted. For this purpose mixtures are prepared resembling the following:

℞.—Tinct. capsici..... f ℥j.
Ol. cajuputi..... f ℥iv.
Camphoræ..... ℥ij.
Chloroformi..... f ℥ij.
Aetheris fort..... f ℥j.
M. S.—A teaspoonful without water every fifteen minutes until the reaction sets in.

I have frequently given this in cholera morbus, and can answer for its utility in that disease. (*Waugh*).

Macnamara gives inhalations of ether for severe cramps, in preference to injections of chloral.

Bartholow mentions tincture of camphor, gtt. v–x every half hour, with a little opium; arsenic; enemas of chloral, with morphine and atropine by the mouth or skin, the most efficient treatment; chloroform, or chlorodyne, a few drops frequently repeated; morphine hypodermically for cholera diarrhœa; carbolic acid with iodine; aromatic sulphuric acid with opium; strychnine as prophylactic during preliminary diarrhœa, and when nearing collapse; iced brandy for vomiting; transfusion of milk, or intravenous saline injections for collapse.

Ringer also favors camphor, gtt. v of strong spirits every ten minutes until symptoms abate, then hourly; arsenic for vomiting or collapse; copper salts; acetate of lead in early stages; spinal ice-bag for cramps.

Waring thinks turpentine, ♏x–xx, every two hours, promises to be of value.

Potter orders absolute rest, recumbent posture, no food, ice *ad lib.*, warm milk enemas, no stimulants, fresh air, friction and heat to abdomen, legs and feet.

Strumpell speaks emphatically of the importance of attending to the slightest gastric or intestinal disturbance when cholera is prevalent. The drug chiefly used is opium:

℞.—Tinct. opii..... ♏xv.
Vin. ipecacuanhæ..... ♏xlv.
Tinct. valerianæ ether..... ℥ijss.
Ol. menthæ pip..... gtt. v.
M. S.—Twenty to thirty drops every two or three hours.

The ethereal tincture of valerian is composed of 1 part of the drug to 5 parts of sp. ether.

When the attack is fully developed, the opium is continued; the patient is wrapped in warm blankets and rubbed, or inunctions of warm oil employed. Hot tea, strong coffee, broth, or mulled wine may be given. Hot baths have often proved beneficial. Vomiting is to be controlled by morphine, or by ice. Cramps in the legs are to be controlled by hypos of morphine. Feeble heart action calls for cardiac stimulants, give champagne, or inject camphor or ether.

Samuel recommends subcutaneous or intravenous injections of a solution of salt, 6 parts; sodic carbonate, 1 part; and water, 1,000 parts, at 100° F. Great caution must be exercised about the diet during the attack, and for a long time after. Thin porridge, milk broths and a soda biscuit at first, with dilute hydrochloric acid.

Shattuck summarizes thus: First stage, absolute rest, opium, and ice *ad libitum*. In collapse, the absorption of drugs is problematical; the utility of active internal treatment is questionable; opium narcotics are undesirable, so that he appears to be incapable of any recommendation beyond mild external stimulation and the tentative use of ice, champagne, or food, in small quantities. If nature can produce reaction, "careful nursing and a sensible symptomatic, but in no way meddlesome treatment."

Fagge found a simple alkali, with a little ammonia and peppermint effectual, in checking much of the diarrhœa occurring during a cholera outbreak. When collapse has developed, opium and astringents are useless or worse. Alcohol must be used cautiously, if at all. If a little weak brandy revives the pulse that fails without it, give the brandy. Ether or ammonia, properly diluted, may be given in any case unless nausea occurs. Ice-water may be given often, in half-ounce or ounce doses. For the cramps, morphine hypos or chloroform whiffs, or pure chloroform, or turpentine rubbed into the painful parts. Epigastric burning may be relieved by sinapisms or cold, locally. Warm flannels, hot bottles and hot baths are praised. The London Hospital's experience with intravenous saline injections was rather favorable. During convalescence, the soda salts should be given freely.

Hueppe advises atropine for severe toxemia. Salol lessens the anemia. The thickening of the blood may be checked by wet packing, or by enemas of a 5 per cent. solution of table salt, first washing out the rectum by hot tannic acid injections, or by solutions of acetate of lead.

Have the injections received, when expelled, into a 3 per cent. carbolic solution, to which a little crude muriatic acid has been added. During an epidemic, carefully protect the food from flies.

Groneman praises creolin—75 grains in 7 ounces of water, repeated as necessary.

Harkin advocates a blister over the right pneumogastric in the neck.

Ritter von Giacich claims good results from the internal administration of gum ammoniac, with stimulants and ether hypos.

Hayem recommends as prophylactic, 1 or 2 drachms of lactic acid daily. To cure, give as quickly as possible, a daily dose of 2½ to 5 drachms.

Dawson Williams recommends rest in bed, and the withdrawal of food and drink. Relieve thirst by sucking ice. Mustard or a wet pack to the epigastrium.

Cantani's method consists in the injection of tannin solutions into the rectum. He employs a solution of 75 to 300 grains of tannin and 30 drops of Sydenham's laudanum, with 2 liters of water at 100° to 104° F., and, perhaps, 13 drachms of acacia. The fluid passes the ileocæcal valve by reverse peristalsis, destroys the bacilli, neutralizes the unabsorbed poison, keeps up the fluidity of the blood, osmosis and excretion of urea, and thus carries off the absorbed poisons. Besides this, he injects a saline solution subcutaneously. The results of this are startling in arousing an apparently moribund case. Enteroclysis is recommended for the early stages; hypodermoclysis for the algid and typhoid. If a case be first seen in an advanced stage, both are employed.

In Chili, when the bowels were loaded, at the beginning, calomel was given, followed by castor oil in an hour. The diarrhœa continuing, stimulants and carminatives were given, with large quantities of muriatic acid lemonade. Later, enteroclysis and mustard baths, at 102° to 104° F., for ten to fifteen minutes, followed by friction and a warm bed, gave very good results. In algid and asphyxia, warm baths were harmful. In the second stage of the typical diarrhœa, vomiting and cramps, enteroclysis was repeated every three or four hours, the diarrhœa usually ceasing after two or three enemas. When it failed, ergotin hypos had some success. Bloody diarrhœa betokened death. Here, the only remedies that were useful, were ergotin and enteroclysis of ipecacuanha solution, 30 grains steeped for an hour in one quart of water. For the cramps, dry rubbing, mustard or turpentine; if very severe, ice frictions were employed. For vomiting, ice pellets, iced champagne, potio Riverii, and tincture of iodine in water. On the approach of the algid stage, ether, camphor and caffeine hypos, mustard and dry rubbing, hot baths and hot air baths. No food allowed. For the algid and asphyxia, hypodermoclysis, of 14 to 51 drachms, according to the pulse. If this failed, peritoneoclysis was tried, saving some. The indication was a normal temperature with absent radial pulse. The only evidences of ill were slight tenderness and tympanites. Absorption from the peritoneum was more rapid, the reaction lasted four hours, and perspiration appeared. The operator watched the result with his finger on the pulse. In the young and strong, 14 drachms sufficed; but, if the pulse did not reappear, the injection was increased up to 3 ounces. For beginning blood stasis, ice frictions ice-bags to the head and spine. For precordial pain and distress, ice-bags and ether hypos. For the typhoid state, enemas of sodium hyposulphite, 30 to 45 grains; quinine or salicylic acid, 1 to 1,000, with ice to head or spine; the soda salt for falling heat, the other for rising.

Penna prefers corrosive sublimate to tannin for enemas. Yoert thus used $3\frac{7}{10}$ grains daily, with a mortality of 9 out of 45 cases.

Pernice gave 75 to 150 grains of naphthalin daily, by the mouth.

Josias used thymol, 1 to 1,000, in all drinks.

Illingworth gives mercury biniodide, $\frac{1}{10}$ grain, three times daily.

Mangen used ether internally, to abort attacks.

Mossé had three recoveries out of eight algid cases, by using ice frictions or cold water. Pauly added to this forced locomotion, with good results.

Winternitz gives the palm to hydrotherapy.

Ross notes that the symptoms of cholera resemble those produced by muscarine, and hence deduces the use of atropine, which he gives hypodermically with morphine, over the stomach. He also gives

sulphuric acid with phenol, salol or betol, as intestinal antiseptics; and gallic acid, to form insoluble compounds with albuminous ptomaines.

Comerford injects liquid extract of ergot in the first stages.

Duboué concludes that all agents which prevent the division of epithelial cells (as nitrate of silver, sulphate of copper, tannic acid) may be prophylactic. To restore circulation in collapse, he suggests intravenous injections, tracheocentesis, and immersion in warm water for a few minutes at a time.

Loewenthal proposed salol, as the model intestinal antiseptic. He gives it in large doses. Reports in India have been doubtful, some favoring salol and others finding it valueless. The probability seems to be that it is of considerable value. Loewenthal took 150 grains in two doses, without any unpleasant symptoms, so that the drug may be given in large doses.

Hehir treated eleven cases with salol, giving 10 grains, with 15 minims of chloroform spirits, every two hours. Every case recovered, the symptoms abating gradually. Nicholson also reported favorably on salol; but Surgeons Stevenson and Tomes treated their cases in the same way, and the mortality was 66 per cent.; and in another Calcutta hospital every case treated by salol died.

Brown gave eucalyptol alone, 5 minims for adults, with a mortality of about 21 per cent.

Lauder Brunton mentions iced brandy, to stop vomiting and stimulate the heart; ammonia by intravenous injection; arsenic in small doses, to stop vomiting; calomel in minute doses, for vomiting; camphor, 5 minims of strong tincture, every ten minutes, with laudanum, while symptoms are violent; carbolic acid, ½ grain, with tinct. iodine, 2 minims, every hour; chloral hydrate, hypos, alone or with morphine, in collapse; chloroform, 2 minims, alone or with opium, every few minutes, to stop vomiting; copper salts, for vomiting; creasote, for vomiting; acetate of lead, as astringent in early stages; morphine hypos, for cramps; saline injections; strychnine, for early diarrhœa and to prevent collapse; sulphuric acid, for early diarrhœa; milk transfusion, for collapse; turpentine, sometimes serviceable, 10–20 minims, every two hours.

Bartholow speaks very highly of chloral hypodermically. When the cramps are severe and the algid stage well advanced, large doses must be given. In one case, apparently hopeless, 60 grains were injected within two hours, with good effect. Atropine has great power in bringing on reaction, but must be used in small doses, or heart-failure results from over-stimulation; $\frac{1}{60}$ to $\frac{1}{200}$ grain is sufficient.

Sir Andrew Clark employed the following with great success at the London Hospital, during the stage of reaction:

℞.—Hydrargyri cum creta..... gr. ij.
Pulv. ipecacuanhæ..... gr. ss.
Pulv. ipecac. comp..... gr. ijss.
M.—S. To be taken night and morning.

The indication is the dry and hard tongue. Salines, lemonade and chlorate of potassium drinks are freely given. Sinapisms or blisters to the nape of the neck helped to restore the urinary secretions.

Aitken characterizes the withholding of water as cruel and mischievous. Pure, cold water should be given in abundance, even urged upon the patient, in spite of vomiting. After purging ceases, Maclean gives enemas of pure water. Cold, wet compresses to the abdomen are grateful. A drink generally relished and retained is made by beating up a raw egg with half a pint of milk, a pint and a half of water, and salt to taste. Whey, weak chicken soup, milk and lime water, etc., may be drank, *ad lib.* Enemas of warm milk, repeated as often as expelled, are of the highest importance if the stools have ceased. Anuria is to be dreaded when opium has been used too freely.

Maclean says that in drinking men, the vomiting of thick, tenacious, paint-like green matter, is a bad omen. Effervescing alkalies, free stimulation of the skin, and chloroform in small doses, form the best treatment. Nourish by the bowels, and give ice at will.

Dosimetric Treatment of Cholera.—Copper arsenite, as a preventive, for children.

Zinc sulpho-carbolate, full doses, given frequently.

Morphine, to relieve pain and cramps, and for cholera diarrhœa.

Creosote, for cholerine, and as preventive.

Strychnine arseniate, as prophylactic, and when pulse weakens.

Strychnine sulphate, tonic for failing heart.

Brucine, tonic for failing heart.

—From *Waugh's Outline.*

To raise the vitality: Period of cold: Strychnine arseniate, phosphoric acid, a granule of each every half hour till return of peripheric heat.

To promote a moderate reaction: Period of heat: Aconitine, digitaline, strychnine, a granule of each every half hour to de fervescence.

To prevent relapse: Period of apyrexia: Quinine arseniate, four granules; strychnine arseniate, one granule, every half hour; soup; wine.

As internal prophylactics, strychnine, one granule; quinine hydroferrocyanate, three granules, every hour. Keep intestinal tract clear by daily use of seidlitz-chanteaud. Any tendency to colicodynia calls for the addition of hyoscyamine, one granule, all taken together. If reaction is slow, use electric currents, one pole in the closed hand and the other carried over the body from center to periphery. Repeat every ten minutes.

Internally, strychnine arseniate, one granule, quinine arseniate, two granules, every ten minutes. After stupor is dissipated and heat begins to return to skin, encourage by strychnine, aconitine and digitaline, two or three of each every ten minutes; also give small doses of tea, with rum added. Continued till sweating. For two weeks after amelioration, continue the arseniates of quinine and strychnine.—*Burggræve.*

News and Miscellany.

OUR POLYGLOT RULES.

MANY languages and dialects are spoken in our great cities besides the English. Among these the great mass of foreigners who cannot read English employ German, Italian or Hebrew. The Medical Inspectors have found in visiting these people that the excellent circulars issued by the Board of Health were often useless, as those who required them most were unable to comprehend them. The need was felt for a circular embodying the fundamental hygienic regulations, couched in the plainest words, so as to be within the reach of the most limited comprehension, and printed in a language the recipient could read. This want we now endeavor to meet. The colloquial dialect is employed in all cases rather than the classical. It was found best to substitute Jargon for Hebrew, as those who are sufficiently educated to read the latter can also read English, while Jargon is the language of the recently imported Russian Jew, who knows no other tongue. These rules will be electrotyped, and should our readers desire copies they will be printed for public circulation. Should cholera appear in this country we will have the rules translated into any language in which they may be useful.

WHAT TO DO TO PREVENT CHOLERA.

HYGIENE OF THE DWELLING.

1. Remove all dirt and rubbish from the house, cellar, yard, alleys and gutters. Do not allow any more dirt to be deposited about the premises. Keep the cellar doors and windows open as much as possible. See that the cellar is kept dry. Mend all broken pavements. Do not keep any live animals; or, if you must keep them, remove every bit of their excreta, and clean them and their homes twice a day. Keep the alleys and gutters washed out clean. Sprinkle dry copperas over the cellar, yard, alley and gutter, every two days, using a pound, in small lumps, each time. Do not let dirt gather in broken paving about the hydrant. The greatest danger is from decaying animal or vegetable substances, especially when damp, and in badly ventilated places, like cellars.

2. Have the privy well emptied, if it is full to within three feet from the surface of the ground. This is required by law, and if the landlord does not do it, report to the Board of Health. If the well is not so full, but smells badly, have it disinfected—or do it yourself with chloride of lime. It will require about twenty pounds at first, or more, if the bad odor continues. Then have a box with twenty pounds of copperas in the privy, and tell every one who uses it to throw down a handful of the dry copperas. This is better than dissolving the disinfectant in water.

3. The greatest danger of all is where a privy well leaks into a cellar. This must be remedied at once, by emptying the well to the bottom and cementing the sides, digging out the foul earth and filling in with clean material. If this cannot be done, move out.

4. Take a look into your neighbors' yards and houses after your own have been put in order, and if anything is needed, ask them to see to it; if they do not, go to the Board of Health and report.

5. Report to the Board of Health if the streets, gutters and alleys are not kept clean. But do not wait for the city officials to move—it takes too long; for there are many to see to, and each must take his turn. Get the neighbors together, and clean up things yourselves. Let this be done regularly, so that the neighborhood is kept clean.

6. Stagnant pools should be drained; all piles of rubbish on vacant lots removed, or else well sprinkled with gasoline and set on fire. This is the only way to disinfect the réfuse heaps in the outskirts, the dumping grounds. It should be done by men who understand gasoline, or frightful accidents may occur. After burning, the vacant lots should be fenced in, in such a way as to prevent any more dumping of rubbish.

7. Garbage should be burnt whenever it is possible. If not, the garbage boxes should be kept clean and emptied every day. Report to the Board of Health every day the garbage is not collected, and, in the meantime, drench it with chloride of lime solution, one ounce to the gallon of water.

8. Plenty of washing, plenty of air and light, plenty of whitewash, wherever these can be used.

WHEN CHOLERA IS IN THE CITY.

Healthy persons "catch" cholera by taking into their systems through the mouth, as in their food or drink, or from their hands, knives, forks, plates, tumblers, clothing, etc., the germs of the disease; which are always present in the discharges from the stomach and bowels of those sick with cholera.

Thorough cooking destroys the cholera germs; therefore, if cholera appears in the city, the following rules should be observed:

1. Eat or drink nothing except in your own home, and eat and drink your food as hot as possible. Trust no restaurant or saloon. Wash your hands and mouth thoroughly before eating. Wear gloves. Don't put your hands or anything else into your mouth uselessly. Use cigar holder if you smoke.

2. Drink no water that has not been boiled at least half an hour. Hot tea is a good, safe drink.

3. Eat no raw fruit, meat or vegetables. Eat or drink nothing that has not been thoroughly and recently cooked or boiled.

4. Especially avoid all unripe or spoiled fruit, decayed, wilted or fermenting vegetables, decomposing meats, fish or fowls. Vegetables must be absolutely fresh, or must be let alone. Touch no fruit or other food exposed on public street stands.

5. The safest foods are such as keep best; salted or dry meats, and the cereals: wheat, oats, rice, barley, rye, tapioca, sago, and their products.

6. Use no milk that has not been boiled for half an hour. Use no cream at all.

7. See that all dishes and drinking vessels are kept perfectly clean. Dip all dishes into boiling water just before useing them. Do not use a public cup, or one that strangers may have handled. If you must drink outside of your house, carry your own cup.

8. Have your sleeping and living rooms well ventilated.

9. Report promptly to your doctor on the first appearance of diarrhœa, dysentery, or any stomach or bowel complaint, however slight; and while waiting for the doctor proceed as if sure that it is a case of cholera. Don't wait, but send at once. If taken ill in the street seek the nearest drug store, dispensary, hospital, or police station, and demand prompt medical attention. Don't permit vomit or diarrhœal discharges to come in contact with food, drink or clothing.

10. Avoid night air, excesses of every kind, over-eating, alcoholic drinks in excess, especially malt liquors, all exposure calculated to cause catching cold, and mental disquiet. Make no change in the accustomed routine, except as above advised. Take no purgatives. Take no medicine except by advice of a physician. Don't eat or handle food or drink with unwashed hands, or receive it from the unwashed hands of others. Don't use the hands for any purpose when soiled with cholera discharges; thoroughly cleanse

them at once. Do not use a strange privy during cholera prevalence.

PRECAUTIONS WHEN A CASE OF CHOLERA HAS OCCURRED.

1. Place the patient in an upper room, as far as possible from the rest of the family. Remove from it all articles not necessary, especially curtains, carpets, upholstered furniture, clothing. Have the room well ventilated.

2. Allow no one to enter the room but the doctor and nurse. Send every one else out of the house who can be spared.

3. Hang over the door a sheet wet with a solution of chloride of lime, two ounces to the gallon of water, and let the sheet dip into a vessel containing this solution, so that the sheet will be constantly wet.

4. The nurse must have a wrapper over her clothes, that is to be removed whenever she leaves the room.

5. A tub of water must be in the sick room containing a pound of chloride of lime to ten gallons of water. Every article of clothing coming off the patient, the nurse, or the bed, must be soaked over night in this before it is taken from the room. A smaller tub of the same solution must be provided, in which all dishes and other things used by the patient must be washed before they are taken from the room. The nurse must rinse her hands in this every time she touches the patient or his belongings.

6. Another vessel must have in it a solution of chloride of lime, 5 ounces to the gallon, or carbolic acid, 6 ounces crystallized acid to the gallon. Any clothing soiled by the patient's stools must be put to soak in this for four hours. Every stool and all vomited matter must be received into a chamber or bed-pan containing a pint of this strong solution, and allowed to stand for two hours before being emptied. When it is possible, the stools and soiled linen should be burnt. A good way is to mix them with sawdust, when they can be easily burnt.

7. The best bed is a woven wire frame with simply a blanket or two over it, and no mattress. If a cholera stool be passed into a mattress the latter becomes extremely dangerous, and should be burnt.

8. Sprinkle the floors, bed, and clothing several times daily with Sanitas disinfectant fluid. A bed of sawdust under the bed, saturated with this substance, or with Platt's chlorides, is of great value. These are preferred because they can be used in large quantities without any injury from the fumes.

9. After the patient has recovered or died, every thing in the room should be burnt, and the room disinfected by competent experts.

MITTEL UND GUTE RATHSCHLÄGE DER CHOLERA VORZUBEUGEN.

REINLICHKEIT DER WOHNUNGEN.

1. Aller Schmutz, Schutt und andere Abfälle ist von dem Haus, Keller, Hof, Durchgänge, Gossen, rinnsteinen sofort zu entfernen.

Kein Schmutz etc darfsich irgendwo im Haus oder Hofe ansammeln. Die Kellerthüren und Fenster lasse offen so viel als möglich.

Halte den Keller im trockenen Zustand. Das Pflaster um das Haus herum sollte ausgebessert werden wo es nur immer Lücken hat.

Lebendige Thiere sollten nicht im Hause sein und wo es nicht anders sein kann, entferne jede natürliche Absonderung und reinige ihre Behälter taglich zweimal.

Die Gänge und Wasserinnen müsten stets rein gespüllt werden.

Streue trockener grüner Vitriol über den Keller boden, Gänge und Wasserrinnen alle zwei Tage wozu jedesmal ein Pfund in kleine Stückchen gebrochen, gebraucht werden sollte.

Schmutz darf sich auch um die Wasserleitung im Hofe (Hydrant) nicht ansammeln. Die grösste Gefahr besteht hauptsächlich in faulen thierischen oder Pflanzen resten, besonders wenn solche in feuchten, luftlosen Plätzen wie Keller etc sich anhäufen.

2. Aborte sollen geleert werden sobald sie bis auf 3 Fuss von der Oberfläche voll sind. Dieses is ohnehin Gesetz und sollte sich der Hauseigenthümer weigern, gehe zur Sanitäts Commission (Board of Health).

Ist die Grube nicht so voll und riecht es übel, siehe das desinficirt wird oder thue es selbst mit Chlorkalk. Man braucht ungefähr zwanzig Pfund und mehr wenn der Geruch fortfährt schlecht zu sein.

Stelle eine Kiste mit zwanzig Pfund grüner vitriol in den Abort und siehe zu, dass jedes welche den Ort benützt eine Hand voll hinunter wirft. Dieses Mittel is besser als derartige Chemicalien im Wasser aufzulösen.

3. Bei weitern die grösste Gefahr jedoch besteht darin, wen ein Abort in einem Keller durchsickert oder hinein läuft. Dem muss sofort abgeholfen werden und zwar mus der Abort vollständig geleert, die Seiten cementirt, die faule Erde ausgegraben und fortgeschafft und frische eingefüllt. Wenn dieses nicht geschieht, verlasse ohneweiters die Wohnung.

4. Ist dein Haus und Hof in Ordnung siehe über den Zaun in deines Nachbarn Hof und sollte es darinnen nicht gut bestellt sein ersuche die Nachbarn dem übel abzu helfen, thun sie es nicht, gehe zur, sanitäts—Commission und theile es demselben mit.

5. Sollten die Strassen, Wasser-rinnen, und Gange nicht rein gehalten sein, gehe zund Gesundheitsrath und rapportire es. Warte aber nicht bis die städtischen Beamten eingreifen,—das dauert zu lange. Besser sich mit den Nachbarn zu verständigen und es selbst zu thun.

6. Stehende Pfuhle, Lachen, etc., sollen abgelassen werden; alle Schmutz und andere Abfälle auf leeren Plätzen müssen entweder fortgeschafft oder gasoline darüber geschüttet und verbrannt werden.

Dieses ist der einzige Weg die Schmutz und Affall haufen, welche täglich in den ausser und um die Stadt liegenden Feldern sich massenhaft anhaüfen zu desinficiren.

Esware aber zu emphehlen dass Männer welche mit Gasoline umzugehen verstehen diese Arbeit thun sollten sonst könnte grosses unglück entstehen. Nachdem derartige Plätze gründlich gereinigt sollten sie eingezaünt werden, so dass ferner hin kein schmutz mehr abgeladen oder hingeworfen werden kann.

7. Küchen abfälle (Garbage) sollte wenn irgend möglich sofort verbrannt werden. Wenn nicht muss der Kübel reingehalten und jeden Tag geleert werden.

Mache sofort anzeige bei dem Gesundheitsrath, im Falle die Küchen Abfalle nicht jeden Tag abgeholt werden, während dessen schütte eine Auflösung von Chlorkalk (eine Unze auf eine Gallone Wasser) darüber.

8. Viel Waschen, viel Luft und Licht, Kalk oder ausweissen und anstreichen wo es nur inmer möglich ist.

WENN CHOLERA IN DER STADT IST.

Gesunde Personen bekommen cholera wenn sie den Keim der Krankheit in ihr Körper aufnehmen.

Dieses kann auf folgende Weise geschehen; Durch den Mund, also durch Essen und Trinken; durch die Hände, Messer, Gabeln, Teller Gläser, Kleider, etc.

Diese Keime werden stets bei den Cholera kranken in ihrem Auswurf oder Stuhl abgang gefunden.

Gutes Kochen zerstört die Cholera Keime, deshalb sollten die folgenden Regeln beobachtet werden, wenn die Krankheit ausbrechen sollte.

1. Esse und trinke nichts ausser in deinem eigenen Hause, vertraue weder dem Restaurant noch der Bierwirthschaft.

2. Drinke kein Wasser, wenn es nicht wenigstens eine halbe Stunde gekocht hat. Thee ist gut und sicher.

3. Esse beileibe kene ungekochten Früchte, Fleisch oder Gemüse.

4. Vermeide hauptsächlich, unreifes oder angefaultes Obst, abgewelktes oder gährendes Gemüse, faules Fleisch, Fische oder Geflügel.

Gemüse müsten voltständig frisch sein oder esse lieber gar keine.

5. Die beste Nahrung ist immer die welche sich am besten hält; eingesalzenes oder gedörtes Fleisch und von Getreide arten. Weizen, Haber, Reis, Gerste, Korn, Tapioca, Sago sind am bestem.

6. Gebrauche keine Milch wenn sie nicht eine halbe Stunde gekocht worden. Kein Rahm sollte gebraucht werden.

7. Siehe zu, dass alle Teller und Drink gläser vollständig rein sind.

Benütze kein öffentliches Drinkgefäss oder solche von dennen. Leube im Allgemeinen drinken als auf öffentlichen Plätzen, Eisenbahnen, etc.

Bist du gewohnt ausser deinem Hause zu drinken, so führe deinen eigenen Becher mit dir.

8. Lüfte dein Schlafzimmer und deine Wohnzimmer.

9. Schicke zu deinem Arzt sobald sich der leichteste Durchfall, Ruhr Dysenterie, oder irgend eine Unordnung im Magen oder den Gedärmen bemerklich macht. In der Zwischen zeit, bis der Doctor kommt, verhalte dich als wenn du wirklich die Cholera schon hättest.

Zögere daher nicht und sende sofort für den Arzt. Solltest du auf der Strasse krank werden, gehe zum nächsten Apotheker, Spital, Dispensatorium, oder Polizei station und verlange sofortige Hülfe.

Sehe zu dass ja kein Auswurf vom Erbrechen oder Stuhl an die Kleider, noch ins Essen oder Trink baren Stoffen kommt.

10. Hüte dich vor Nacht luft, über anstrengung oder Umnässigkeit im Essen, geistigen Getränken hauptäschlich Malzgetränken; setze dich nicht der Gefahr aus eine Verkältnng zu nehmen. Bleibe ruhig im Gemüthe. Aendere deine Lebensweise nicht weiter als die eben gesagten Vorschriften gehen.

Nehme keine Abführmittel. Keine Arznei ohne deinen Arzt.

Esse und trinke nichts ohne deine Hände gewaschen zu haben, berühre auch nichts von Andern deren Hände ungewaschen sein könnten.

Sollten die Hände mit Cholera Auswurf beschmutz werden wasche dieselben sofort.

Gebrauche keinen fremden Abort während der Cholera zeit.

VORSICHTSMASSREGELN IN EINEM CHOLERA FALLE.

1. Bringe den Kranken in ein Zimmer im oberen Stock, so weit wie möglich von der Familie; nehme alle Gegenstände nicht unbedingt nöthig, heraus, z. B. Vorhänge, Teppiche, gepolsterte Möbel, Kleider etc. und lüfte das Zimmer.

2. Lasse Niemanden ins Zimmer ausser den Arzt und die Wärterin. Alle andere sollten das Haus verlassen so viel als möglich.

3. Die Thür verhänge mit einem Bett tuch benetzt mit Chlorkalk zwei Unzen auf eine Gallone Wasser. Lasse das Bett tuch in ein Gefäss hängen, welches diese Auflösung enthält, so dass es immer nass bleibt.

4. Der Wärter oder die Wärterin muss einen Überwurf über die Kleider haben, welcher beim Verlassen des Zimmers abgelegt wird.

5. In dem Krankenzimmer muss stets ein Kübel mit Wasser und 1 Pfund Chlorkalk auf zehn Gallonen Wasser enthalten jeder Gegenstand, Kleidungs stück von dem Kranken oder der Wärterin muss in diesen Kübel über Nacht liegen ehe es aus dem Zimmer getragen werden darf.

Ein kleinerer Kübel mit derselben Auflösung hat ebenfalls in Zimmer zu sein, darinnen haben alle Teller und andere Sachen die der Kranke gebraucht gewaschen zu werden bevor sie aus dem Zimmer gebracht werden dürfen.

Die Wärterin muss ihre Hände in dem Gefässe waschen sobald sie irgend etwas berührte sei es der Kranke oder die von ihm gebrauchten Dinge.

6. Es muss ferner noch ein drittes Gefäss in Zimmer sein. In diesem muss eine Auflösung von Chlorkalk 5 Unzen auf die Gallone, oder Carbolsäure (6 Unzen) christallisirte säure auf die Gallone.

Alle beschmutzten Kleidungs stücke sei es durch Auswurf oder Abgang müssen 4 Stunden in dieser Auflösung liegen. Für jeden Stuhl abgang hat ein Nachtgefässe oder Bettgefäss mit einer Pinte (halbe Kanne) von dieser starken Auflösung bereit zu sein, und zwei Stunden darin zu bleiben, bevor das Gefäss geleert werden darf.

Das beste wäre, wenn je möglich, den Stuhl abgang und beschmutzten Tücher zu verbrennen, welches leicht geschehen kann wenn die Sachen mit Sägespänne gemischt warden.

7. Das geeignestc oder best Bett wäre ein Drahtgestell mit einer oder zwei Decken aber kemer Matratze. Kommt ein Stuhlabgang in die Matratze so ist das sehr gefährlich und sollte dann dieselbe unbedingt verbrannt werden.

8. Bestreue den Zimmerboden Bett und Kleidungsstücke täglich mehreremal mit "Sanitas disinfecting fluid." Ein sack Sägespänne getränkt mit diesem Fluid oder mit "Platt's chlorides" ist sehr zu empfehlen. Diese letzten haben den Vortheil dass man gross Quantitäten gebrauchen kann ohne Gefahr von dem Rauch zu fürchten.

9. Nachdem der Kranke genesen oder gestorben ist, sollte alles im Zimmer Vorkandene verbrannt oder von erfahrnen Leuten desinficirt warden.

COSA SI HA DA FARE PER PREVENIRE IL COLERA.

PULITEZZA A CASA.

1. Ogni immondezza, come stracci, calcinaccio e qualunque miscuglio mal sano devono essere allontanati dalla casa dalla cantina, dal cortile, dalle grondaie e dai passaggi o viottoli.

Non permettete che si accumuli un altra volta robbaccia attorno.

Aprite la porta e le finestre della cantina e lasciatele aperte per quanto sia possibile.

La cantina deve essere ben asciuta. Il lastricato e special mente i mattoni attorno la casa devono essere riparati.

Non tenere animali vivi, e se non potete far altrimenti fate portar via ogni escrezione e pulite le loro gabbie o i luogi dove questi animali sono tenuti due volte al giorno.

Viottoli e grondaie o gronde hanno d'essere ben lavate. Spargete vitriolo (copperas) secco nella cantina, nel cortile, nei viottoli almeno ogni due giorni circa una libra in piccoli pezzetti.

Il più grande danno però viene da cose putrefatte sia di animali o de vegetabili e special mente nelle cantine o luoghi umidi e mal ventilati.

2. Le latrine debbono essere votate se sono piene fino a 3 piedi dalla superficie. La legge provede per questo e se il padrone di casa non lo vuol fare allora si va all'ufficio della sanità (Board of Health). Se il luogo commodo non è, troppo pieno ma se c'e cattivo odore bisogno che sia disinfettato o purgato con "Chloride of lime," del quale ci vuole almeno 20 libre al principio o più se il mal odore continuasse.

Purgato che sia, mettete una cassetta con 20 libre di vitriolo nella latrina del quale ogni uno che usa il luogo deve gettare una mano pieno giù. Usando il vitriolo in pezzetti fa più ngetto che scioglerlo in acqua.

3. Di tutti i pericoli il più grande è quella quando la latrina filtra dentro in cantina.

Questo dev'essere rimediato all'istante votando la fossa fino al fondo, cementando le parti laterali, cavando fuori la terra corrotta e rimettendo fresca. Se non si può far questo sprattate.

4. Guardate anche nei giardinio cortili dei vostri vicini, civè soltanto dopo che da voi sia tutto in buon ordine, se poi vedete qualche cosa storta dagli altri allora persuadeteli di fissar anche loro le cose come si deve; se non lo fanno andato all 'ufficio della sanità.

5. Priferite anche se vedete strade gronde, viottoli o passaggi fra le case se non sono puliti.

Ma se aspettate fino le cose siano rimosse dagli guardie civiche anderebbe male, la migliore cosa, è di farlo subito da se ocoll'amito con i vicini.

6. Fossate con acqua stagnata devono essere fognate; mucchi di immondezze in luoghi solitarii bisogna che siano portali via o buttato sopra un poco di gasoline e bruciateli.

Questo è la miglior maniera per disinfettare i mucchi di immondezze che sona a monti da per tutto attorno della città.

Depo che questa robbaccia sia distrutta bisognerebbe fare uno steccato per impedire che si accumuli un altra volta tanta sporchizzia.

7. Avanzi di legumi o vegetabili dovrebbero essere bruciati se alquanto possibile. Se no, allora badate ben che i secchi o vasi ove tali cose sono messi siano ben lavati e votati ogni giorno. Se l'uomo che porta via questi avanzi (garbage collector) non viene rapportatelo subito all 'ufficio della Sanità, e intanto versate una soluzionne di "chloride of lime," 1 oncia al gallone nel recettacolo.

8. Molto lavare, assai aria e luce e biancheggiare cod la calcina ovunque si può.

SE IL COLERA È NELLA CITTÀ.

Persone in buona salute pigliano il colera per la bocca civè mangiando o bevendo, dalle loro mani, coltelli, forchette, piatti, bicchieri, abiti, etc., etc., i germi di questa malattia si attaccano sopra ogni cosa e guindi trovano la via nel sistema come or ora menzionato.

Le escrezioni dei maladi sono pieni di questi germi.

Se i nutrimenti sona ben cotti o cucinati i germi possono essere distrutti. Ecco dunque alcuni regole se it colera venisse:

1. Non mangiare nè bevere fuori da casa vostra, non vi fidate del restorante nè del venditore di birra civè il "saloon."

2. Non bevere acqua se non ha bollito per almeno una mezz'ora. Tè si può bevere questo è salvo.

3. Non mangiar frutta fresca, nè carne crudo nè legumi. Infine non mangiate e non bevete niente che non fosse cotto ben bene.

Non toccare sopra tutto frutta non matura o gudstata, vegetabili appassiti o acidi, carne mal andata, pesci o volatili decomposti. Legumi devono essere assolutamente freschi o lasciateli stare affatto.

5. Mangerie che si possono preservare sono da preferire e sono più salve come; carne salada o secca e dei cereali, frum-

ento, vena, riso, orzo segato, tapioca, sago, etc., sono buoni.

6. Non usar latte senza far lo bollire per una mezz'ora. Crema non dovrebbe essere usato affatto.

7. Badat e che i piatti scodelli bicchieri etc. sono ben puliti. Non usare bicchieri, coppe alle publiche fontane o in ferro vie ove qualunque si serve con lo stesso bicchiere. Portate un vostro bicchiere o coppa se volete bevere fuorila vostra casa.

8. La camera da letto e anche la cucina il salotto infatti tutta la casa dev'essere ben ventilata.

9. Appena vi sentite un pò strano nell-estomaco o nei indestini o con la minima diarrea (scioglimento di viscere) mandate o andate subito dal dottore, e figuratevi di aver già il colera. Quindi non trascurara. Se vi sentite mal per la strada, andate kal prima farmacista, o all'ospidale più vicino od anche alla stazine di polizia, e cercate rimedio. Badate bene che nulla del vomito o della diarrea viene in contatto con cibi, bibite o abiti.

Non esponetevi all 'aria notturna non vi eccitate, non mangiate troppo guardatevi di bibite spiritose, tenete la mente quiéta e cercate di non pigliar un raffrettante.

Non vi purgate a buoni conti non pigliate medicina senza il dottore.

Non mangiate o toccate cibo o bevanda senza aver le mani lavate e non pigliate neanche niente dagli altri che avessero le mani poco pulite. Non usate le vostre mani per qualunque cosa se sono state in contato con escrezioni di maladi di colera senza ben lavarle. Non andate a un luogo comodo in un altra casa durante la presenza del colera.

PRECAUZIONE IN CASO DI UN ATTACCO DI COLERA.

1. Mettete il paziente in una camera al piano superiore, quanto pin lontano dalla famiglia, tanto meglio. Levate tutti gli articoli dalla camera, come le tende, i tappeti le mobilie imbuttite, sofa, poltrone, etc. Che la camera sia ben ventilata.

2. Non permettere ad alcuno di entrar nella camera eccetto il Dottore o il infermiere. Che tutti vanno via dalla casa quelli che possano alquanto.

3. Attacohi un lenzuola bagnata in una soluzione di "chloride of lime, 2 once a un gallone d' acqua e fa che il lenzuolo resti in parte nel bacino che contiene la soluzione, questo fa che resta sempre bagnato.

4. L'infermiere dev' essere coperto con una sopra vesta "wrapper" che può levare ogni volta che lascia la camera.

5. Tieni un tubo di acqua nella camera contenente una libra di "chloride of lime" a 10 gallone d' acqua. Ogni oggetto venendo dal malado, dall' infermiere, dal letto dev' essere messo in questo tubo e lasciatovi una notte prima di essere portato fuori la camera.

Un altro tubo più piccolo dev' essere preparato nel quale tutti i piatti ed altre cose usato dall' ammalado devono essere lavate prima di portarle fuori dalla camera.

L' infermiere deve lavarsi le mani ogni qualvolla abbia toccato qualche cosa del paziente anche se fosse stato soltanto qualche vestimento.

6. Un terzo bacino o simile bisogna centenere una soluzione di "chloride of lime" 5 once al gallone, o anche acido carbolic (carbolic acid), 6 once acido cristallizato al gallone. Ogni vestimento o panno sporcato dalle escrezione dell' infermo debbono essere per 4 ore in questa soluzione. Ogni passaggio dev'essere in un vasso da notte contenente una "pinta" di questa forte soluzion e edeve starvi per 2 ore prima di essere votato. Se possibile le escrezieni c le lenzuola spercate dovrebbero essere bruciate.

7. Il miglior letto c un materazzo di fil di ferro, una o due coperte e non matrazzo di stoffe.

Se un escrezione da un malado viene in contatto con un materazzo il caso diventa terribile pericoloso ed è miglior di bruciar tutte.

8. Sparge la terra, la cammera, i vestimenti, il letto differente volte con un fluido chiamato "Sanitas disinfectant fluid." Un sacco pieno di legatura sotto il letto bagnato ben in questa soluzione o con Platt's chlorides vale assai. Queste sono da preferire perchè possono essere utilizati senza danno dai fumi.

9. Dopo che l'infermo è fuori danno o ristabilito, o dopo che sia morto si dovrebbe bruciare tutte le cose c la camera disinfettato da qualche duno che ha esperienza.

כען אויפטריקענען, א מיסט הויפען אויף א ט[illegible]ע־
דינטען פלאטץ זאלל מען אפראמען אדער בעניפען
מיט גאזאלין און אונטערצינדען דעם אין דיא אייג־
ציגע וועג: דעם שמוטץ אין דעם שלעכטען גערוד
פון דעם זעלבען פלאטץ צו פערמיידען און מען זאלל
ארום צאממען דאס מען זאלל מעהר קיין מיסט
דארט איבער בריינגען.

7. שלאפ און פערוועלקטע שפייזע זאלל
מען פארברענען וואו נור מעגליך אויך זאלל מען דיא
שלאפ באקסעם ריין האהטען אונד אויפלעדיגען יע־
דען טאג, און וואו מען קומט ניט צו נעמען דיא
שלאפ דאן זאלל מען בעריכטען אין באארד אף
העאלט.

8. מען זאלל אימער צו די רומפ וואשען און
וועגן נויטהוועגדיג איזט זאלל איממער צו לופטיג
זיין.

וועג דיא כאלעריא איז אין שטאדט.

נעזונדע פערזאנען וועדען אנשטעקענד
מיט כאלעראַ פון אומגעזונדע שפייזע אונד געטרענ־
קע אדער וועגן זיא פאסספען מיט אונגעוואשענע
שמוטציגע הענד אדער וועג זיא בענוטצען שמוטצי־
גע גשעשיהר אדער שמוטציגע כלי.דער פארפאל
פון כאלעראַ איז וועג מען פיעלט ניט גוט איבלאנג
און לייט לייב האס איז דיא כאלעראַ קראנקהייט.

איבער פארהארבענע שפייזע פארבריטעט זיך
דיא כאלעראַ עפען דאהם איז נאטאוועגדיג צו
ערקלערען דיא פאלגענדע רעגעלן:

1) דאס מען זאלל אגדערסטוואו ניט עסספען
וויא אין דעם איגענעם היימאטה און מען זאלל
זיך ניט אונפערטרויען אין רעסטוראנט אדער אין
א סאלון. 2) מען זאלל קיין רייע וואסער טרינקען
אונד וועניגסטען זאלל זיין געקאכטע א האלבע
שטונדע, האס זיבערפטע נעטראנק איז טהע. 3) מען
זאלל איבערהויפט ניט עסספען קיין רייע פרוכט, פליישּ
פיש נעפוינעל אין גרינשען שיידען וועג עס זאלל זיין
נוט נעקאכט און וועז ניט זאלל מען עס בעסספער
ניט עסספען. 5) דיא נעזונדסטע אונד זיכערסטע
שפייזע וואס מען קען עסספען איז נור האס וואס
האלט זיך איממער אין גוטע צו שטאנדע אלעס נע־
טראקענע און נעזאלצענע פלייש נעטרייד פראדוק־
טכע פאן ווייץ ריין. גערשטען קארן א. ד. ג. 6)
מען זאלל קיין זויעדע שמאנט ניט נוטצען מילך קאן
מען נוטצען וועג מען אויפנעקאכט בעפאר עסספען. 7)
אויף צופאסען דאס אללע נעשיהר אין ריינעס צו־
שטאנד צוהאלטען וויא אויך פרעמדע נעשיהר ניט
צו בענוטצען, וועג מען אויפנעהען ווילל זאלל מען א
אייגענע קאפי מיט נעהמען צו טרינקען. 8) מען
זאלל איממער וואס מענליך אפפען האלטען דיא

מיטטעל צו פארהיטען דיא כאלעראַ,

נעזונדהייטס לעהרע פיר וואהנדיזער.

1. מען זאלל אויסריינינגען אללע שטומץ אין
אבפאל פאן הוי, קעלדער יארד זיטטען דורך נאנג אין
אבנוס רינען אונד מען זאלל זיך ניט ערלויבען צו בע־
אומציכטינגען דיא הויז, מען זאלל אפפען האלטען
דיא טירען, פענסטער פון הויז איז קעללער וויא פיעל
מענליך, און דאס דער קעללער זאלל זיין איממער צו
אין אייגע טרוקענע צושטאנדע. וועגן מען האלט
פיה דאנן זאלל מען זייא אין זייערע פלעטצע רייניגען
2 מאל טענליך, מען זאלל זעהן יעדען טאג צו וואשען
דעם פלאאר, יארד, אויפערע נאנג און פיימענט
און אויסשיטען מיט טרוקענע וויארטעל אין אללע
דיא פלעטצע און אין קעללער, דאס נרעפטע נע־
פאר איזט וועגן מען ניט אויפפאסט אויף פיה־
צוכט אדער דומפינע גשעשיער וועזען אין שלעכט
ריכענדע פלעטצע.

2. וועג דער וואטער קלאזעט איז בעדעקט
מיט שמוטץ 3 פוס פון נרונד זאלל דאס זעלבע בע־
ריכטעט וועדען ביי נעריכט און וועג דער אייגענט־
היממער קיממערט זיך ניט.וועגן דעם דאנן זאלל
דאס זעלבע בעריכטעט וועדען אין באארד אף
העאלטה אפפיס, וועגן דער וואטער קלאזעט האט
א שלעכטען גערוך דען זאלל מען אויפשמירען מיט
אונגעלאשענען קאלך אונד דאס בעסטע וועג מען
זאלל האלטען אין וואטער קלאזעט א באקס מיט
קופער וויארטיל אונד ווער עס בענוצט דעם וואטער
קלאזעט זאלל א רויך שיטען פאן דאס זעלבע זא
דאס דיא שמוטץ זאלל ניט צופיערט וועדען אין
וואסער.

3. דאס נרעפטע נעפאר איזט וועג עס
רינט אריין פון וואטער קלאזעט אן אין קעללער
דאן זאלל מען דאס רעפארטען אין באארד אף
העאלטה אונד וועג

אונד וואשען גוט בעפאר מען טראנט עס ארויס פון ציממער אונד נאך א קלענערע כלי פון דאס זעלבע מוז זיין אפגעזאנדערט אין וועלבע מען זאלל וואשען אללע גשיר, דיא וועכטערען זאלל וואשען דיע הענד אין דעם זעלבען מיקסטור צו יעדע צייט וועז זיא בעריהרט דעם קראנקען אדער זיינע קלייד ער.

6) א שטארקער מיקסטור פון 5 אינצעם כלאריד אף ליים אין א גאללאן וואסער אדער קארבאלינ אפיד אין 6 אינצעם קריסטאל אסיד אין אנאללאן אין דער. זעלבע מיקסטור זאלל זיין פיר אללע שמוטציגע קלייד ער וואס פון דעם קראנקען אראפ קאמט.

7) דיא בעט זאלל זיין פון אייזען גשפלאכטען אריבער גשצרייט מיט א בלאנקעט אוז קיין מאטרעסס בענוצט וועכן שטוהל אפנאנג אדער וועלבע שמוציג פון קראנקען אויף א מאטראסס איז זעהר גשפעהרליך מען זאלל באלד פארברענגן.

8) מען אלל אויס שפריצען דעם רום מיט איינען ריכענדען ספירט אויף דאס זעלבע זאלל מאן אויס מישען מיט זענאבין אונטערן בעט אויסשיטען.

9) וועז דאר קראנקער איז גזוגד געווארען אדער גשטארבען ר׳ל זאלל מען אללעס פון ציממער פארברענען אונד דאס ציממער נוט אויס שפריצען מיט ספירט אונד וועז איהר וועט אללעס היטען ווירד איהר פון אללע שלעכטעס בעווארענד זיין.

It is earnestly to be hoped that the orders given to shoot any one attempting to board the cholera-ship Moravia will be executed to the letter. And if the name of the journal whose reporter made an attempt to do this is made public, a general boycott would be likely to put a check to such objectionable advertising.

Note.—In the *Indian Medical Record* for August 1, 1892, Hehir records his later experience with salol in cholera, in which he has found the drug of no special value; the percentage of recoveries being the same as when general treatment was employed. Furthermore, he finds the comma bacillus thrives in salol solutions less than 10 per cent. in strength. He attributes a prophylactic virtue to quinine, as also does Lawrie; while in 7,000 cases in which sulphuric acid was given as a prophylactic not one case of cholera occurred.

טיערען אונד פענפטערפ אום דאם נוט זאלל אויפגעלופטערט זיין. 9) וועז מען פיעלט ניט זוט אם מאגען אדער וועלבע אינניריליכע שמערצען דאן זאל מען באלד וואפ צום שנעלפטען אדאקטאר פארופען אוז מען זאל זיך ניט אפלאזען ביז דיא צייט וועז דער דאקטאר קאממט וועז מען פיעלט ניט נוט וועז מען איז אויף דער שטראפסט דאן זאלל מען באלד בעווכען דיא נאהענפטע דרוג ספארע, דיספענפערע, האפפיטאל אדער פאלים שטיינען אונד בעטען פיר א ארצטליכע אונטערזוכונג מען זאלל קיין אפפירונג אדער ברעך מיטטעל בענוצען. 10 מען זאלל זיך בעווארענען פון צופיעל נאכט לופט גענינסענן אויך ניט איבערמאס עסען אונד טרינקען אלקאהאל איבער הויפט ניט צוטרינקען קיינע מאלין ליקערפ וואפ דאהורך בריינגט דיא פארקעלטערונג, מען זאלל קיינע היימעשע מעדיצין נעהמען נור וועז מען איז פארארדערט פון א דאקטער, מען זאלל ניט עסען אדער בעריהרען מיט שמוטציגע הענד אדער פון אנדערט שמוטציגע הענד וועלבע זיינען א גשטעקט פון כאלעריא, מען זאלל ניט בענוטצען א פרעמדען וואטער קלאזעט וועז דיא כאלעריא איז אין שטאדט.

וועז א פארפאל פון כאלעריא האט געטראפען אין אין הויז.

1) מען זאלל דעם קראנקען אפזאנדערען פון דיא נאנצע פאמיליע אין אפארטען אבערשטען ציממער מען זאלל דעם ציממער אויסלעדינען וויא פיעל מעגליך איז איבערדויפט גארדינען קארפעטס, באצוגענע פאָרניטורע קלייד ער א. ד. נ. אויך מען זאלל דעם ציממער לופטיג האלטען.

2) קיינער זאלל ניט עלויבט זיין אין רופ ארייז צוגיין) אויסער דער דאקטאר און דיא וואַרטערען אי ן אלנעמיין זאלל מען אפטרעפטען וועז מען קאנזיך העלפען אנדערטווא לאדזירעז.

3) דיא טהיר פון ציממער זאלל זיין בעשטענדיג פערהאנגען מיט א נאשען לאקען אין וועלבע זאל אבגעווייקט זיין פון א מיקסטור פון 2 אינצעם כלאריד אף ליים אין א גאללאן אף וואסער.

4) דיא וועכטערען זאלל האבען א ראפער צו איהרע בעדינונג דעם קראנקען אוז וועז זיא פער־לאזט דעם ציממער דאן זאלל זיא זיך דעם רא־פער אפנעמען.

5) א מיקסטור פון 1 פונט כלאריד אף ליים אין 10 נאלאנפ וואסער צו וואשען אללע קלייד ער אוז העטדער וויא אויך בעטצייג וויקען

GREAT excitement has been caused in London through a discovery made in examining a shipment of rags that was being landed. Many had come from cholera districts and were ordered to be burned at once. The vessel sailed from a German port, but the infected articles were the gathering of a wide territory. In several bundles the contents were so repulsive as to make only the most casual investigation possible or necessary.
—*Sanitarian.*

A POST-MORTEM PHENOMENON IN CHOLERA.—A Vienna physician, Dr. Frey, states that the supposed burial alive of patients apparently dead from cholera may be explained by the fact that the corpses of those who have died from the disease are for some time after death subject to convulsive movements of some muscles, or even of whole groups of muscles. Professor Eichorst also relates that on one occasion he had left a patient for dead, when, three hours later, he was told that the dead man had revived. He found that the muscles of the upper arm were giving short quick motions, following each other rapidly, which were interrupted by contractions of the whole group of muscles, whereby the forearm was visibly contracted. The fingers were also distinctly observed to be moving as though playing a piano. It was only after three hours that the movement of the muscles ceased.—*Hos. Gazette.*

HAHNEMANNIAN TREATMENT AND PREVENTION OF CHOLERA.—A dazzling Hahnemannian luminary states in one of our dailies that camphor is a specific for cholera, the mortality at Naples in 1884, under the camphor treatment, being only 0.15 of 1 per cent. (truly wonderful), whereas under "allopathic" treatment the mortality was over 50 per cent. No doubt the 998½ per mille recoveries were cases of homœopathic cholera. As a sure and safe—certainly safe—prophylactic measure against the Asiatic scourge it is recommended to either wear a copper plate next to the skin, it having been ascertained that copper miners and other workers in copper or brass are immune, or else to put half a teaspoonful of milk of sulphur into each stocking and go about one's business.

This is both easier and cheaper than to procure pure drinking water and enforce cleanliness in other respects, and as it is said to never fail, there will be no need of further investigation of the nature of cholera, for the only practical object of such investigation is to find the means of prevention or cure!—*Pacific Med. Jour.*

A POOR TIME FOR CRITICISM.—A press dispatch from New Orleans credits a former President of the Louisiana State Board of Health with some very injudicious as well as, in part at least, unfounded utterances in disparagement of quarantine on the Atlantic coast. Among other things he is reported to have said:

"As for New York and other ports along the Atlantic seaboard, excepting Charleston, their methods and equipments are wholly inadequate to their necessities. They are, in fact, as revealed by this emergency, mere political-office-rewarding stations, whose methods are a perfunctory make-believe to hoodwink the public with a show of importance, while in fact they lack every essential of scientific requirement and trustworthiness."

This statement is so misleading, and so malicious as well, that we are inclined to believe the gentleman in New Orleans has been incorrectly reported. But whether he has or not, the present is not the time to excite distrust and suspicion of those charged with the defence of our country against this foreign invasion. A very grave danger threatens us, and it is the duty of every one to do what he can to aid those who are charged with the task of averting it. It is now too late to make any change in methods or men at our own or other quarantine stations, were it possible or desirable to do so. They are now undergoing a severe test, and if they succeed in keeping out cholera, let them receive the credit that will be their due, whatever sanitary system or whatever political party may derive advantage therefrom. We believe the system of maritime sanitation in use at the quarantine stations of the Mississippi river is a good one, but we cannot agree with the gentleman above quoted when he asserts that the only possible means of escape will be through "extraordinary efforts in the immediate enforcement of rational and scientific methods of defence, as embraced in our own (the Louisiana) quarantine system."
—*Med. Record.*

DRIVERS of English beer-wagons are said to receive a large part of their wages in beer.

IN THE TIMES AND REGISTER for August 13, the articles on "The Influence of Nasal Affections on the Respiratory Apparatus" and "Mercurial Sore Throat" should have been credited to the *Revue Internationale de Rhinologie, Otologie et de Laryngologie* instead of to the *Revue de Laryngologie.*

THE annual meeting of the Southern Surgical and Gynecological Association has been postponed from the 8th, 9th and 10th, until the 15th, 16th and 17th of November. It was thought wise to change the time of the meeting from the fact that the 8th of November is the date of the Presidential election. Everything points to a very successful session.

LORTET and Despeignes have shown that earthworms bring the bacilli of tuberculosis to the surface of the earth, in full possession of their virulence. Pasteur has already shown that the microbes of anthrax are resurrected by earthworms, and Freire claims the same to be true as regards the yellow fever germ.

This destroys the last remaining shred of pity we have hitherto felt for the worm when wriggling on a hook. The worm must go and *cremation* must come, at least for all infectious cases.

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S. Navy for the week ending September 3, 1892.

RUSH, C. W., Passed Assistant-Surgeon. From special duty in connection with the Inter-Continental Railway Commission, and to the Navy Yard, New York.

MARSTELLER, E. H., Passed Assistant-Surgeon. Detached from practice ship Constellation, and to the Navy Academy.

STOUGHTON, JAMES, Assistant-Surgeon. Detached from practice ship Constellation, and to wait orders.

ARNOLD, W. F., Passed Assistant-Surgeon. Ordered to Naval Station, Port Royal, S. C.

GRIFFITH, S. H., Passed Assistant-Surgeon. Detatched form the U. S. S. Jamestown, and to the U. S. S. Constellation.

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"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting, and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,

ARCH M. CAMPBELL, M.D.

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PAGE

ORIGINAL ARTICLES:

THE EASTERN SHORE OF MARYLAND AS A HEALTH RESORT FOR CONSUMPTIVES. By C. W. Chancellor, M.D. - - - - - 319
AIKEN, SOUTH CAROLINA, AS A HEALTH RESORT FOR PHTHISIS. By Walter Davidson Bidwell, A.M., M.D. - - - - - 322
THE PECOS VALLEY OF NEW MEXICO. By W. Thornton Parker, M.D. - - - - - 323
THE SOUTHERN ROCKY MOUNTAIN REGION AS HEALTH RESORTS FOR CONSUMPTIVES. By W. N. Sherman, M.D., Ph.D., F.R.M.S. - - - - - 325
LAS VEGAS, NEW MEXICO. By Francis H. Atkins, M.D. - - - - - 328
SOUTHERN PINES, N. C. By William F. Waugh, M.D. - - - - - 329
READING (PA.) AS A HEALTH RESORT. By F. W. Frankhauser, M.D. - - - - - 330

EDITORIAL:

JOHN L. SULLIVAN AND HIS WATERLOO. *T. H. M.* 333
BUSINESS HABITS - - - - - 333

ANNOTATIONS:

The Deadly Parallel - - - - - 334

PAGE

Rolled Journal - - - - - 334
"Student's Number" - - - - - 335
"Special Numbers" - - - - - 335

LETTERS TO THE EDITOR:

The Tennessee Mountain Region - - - - - 335
Resorts for Consumptives. *Duncan* - - - - - 335
Lampasas, Texas. *Graham* - - - - - 336
Health Resorts for Consumption. *Roberts* - - - 337
Las Cruces, Dona Ana County, New Mexico. *Pétin* 338
Manifested Interest in Special Numbers. *Chadman* 339
Pilocarpine in Erysipelas. *Beysel* - - - - - 339
Retroflexion *J. F. W.* - - - - - 339
Gun Shot Wound—Medico-Legal Advice. *Tillotson* 339

THE MEDICAL DIGEST:

Benzoate of Soda in Therapeutics (*Liégeois*)—Southern California (*Edwards*)—Dr. Shakspeare on the Cholera—Strychnine in Cholera Cases (*French Mullen*)—The Origin and Diffusion of Cholera (*Cornish*) - - - - - 332, 340–342

MEDICAL NEWS AND MISCELLANY - - - - 343

NOTES AND ITEMS - - - - - iv, viii, xi

Original Articles.

THE EASTERN SHORE OF MARYLAND AS A HEALTH RESORT FOR CONSUMPTIVES.

BY C. W. CHANCELLOR, M.D.,
Secretary of the Maryland State Board of Health.

LORD BACON was the first to recommend elevated situations as being conducive to health, owing, as he thought, to the purity of the air in such situations. In support of this theory he cites the rising grounds of Arcadia and Ætolia, and other parts of Greece, where the inhabitants are reported to have lived long. The celebrated Pallas also informs us that in a province of Russia he saw many old people in the elevated districts; whereas in the plains of that very neighborhood they were not distinguished for longevity.

In the face of many facts to the contrary, it is quite evident that Lord Bacon's theory has no substantial foundation, at least so far as the prevalence of consumption is concerned. In point of health certain low lands of Italy were superior to either the mountains of Greece or the elevated districts of Russia, for in the seventy-sixth year of the Christian era, when a census of the people was made, there were two hundred and sixty-five persons beyond one hundred years of age in that part of Italy which lies between the Po and the Appenines. Sir James Clark says, that consumption is not a common disease in either Pisa or Venice; but it frequently exists in the elevated districts of the country.

Topographical peculiarities do not always account for the predominant characteristics of climate, nor convey to the mind of the casual observer a correct appreciation of their sanitary influence.

Thus it might be rationally inferred, from the marshy aspect which surrounds the city of Venice that intermittent fever and bronchial affections would be the prominent diseases of the place, whereas it is, in truth, the resort of such as have elsewhere imbibed the pernicious poison of these disorders. Dr. Scoresby Jackson says: "In the early stages of consumption and in some chronic bronchial affections Venice may be recommended."

The Kirgis Steppes, of Asia, which is below the level of the sea, enjoys almost complete immunity from consumption; and from statistics furnished by a number of intelligent physicians and other persons, it is safe to assert that the peninsular of Maryland, known as the "Eastern Shore," a large area of which is only a few feet above sea level, furnishes one of the grandest atmospheres for persons suffering with pulmonary affections to be found in the world. Many physicians practicing in this section of the State testify that consumption is an exceedingly rare disease among the native residents, and that in all forms of bronchial affections the climate is very generally beneficial, especially in cases where there prevails great irritability of the bronchial mucous membrane. Nothing is more common than to meet with bronchial diseases which, after having been benefited by a short residence on the Eastern Shore, are aggravated by a visit to the high lands, and again relieved by a return to this locality. In incipient consumption the Eastern Shore of Maryland may be considered the most favorable place of residence in America.

After all, however, it is with climates as with other things, trustworthy evidence as to what they have accomplished is the most valuable. In this connection I quote from the opinions of medical practitioners and others of extensive experience residing on the peninsula.

Dr. Davidson says: "Consumption, either hereditary or acquired, is comparatively rare on the peninsula among the native population, and while many have come here from northern latitudes with this disease in various stages of development, we do not know of a case that was not promptly ameliorated by the change, and in many cases the most remarkable cures have been effected in persons who were pronounced hopelessly ill."

Dr. A. P. Sharp, of Rock Hill, Kent county, Md., writes: "Most of the inhabitants in this neighborhood are engaged in the oyster and fishing business, which compels exposure to all kinds of weather, and I am surprised to find that both young and old are entirely free from the usual coughs and the pulmonary complaints so common in other places. During my residence of over twenty years here I have never seen or heard of a single case of consumption among the rising population, and hundreds have grown to manhood and womanhood in the time. The question has often occurred, 'To what agent can this peculiar condition be traced?' I have made repeated experiments with ozone paper, and have never failed to find that the paper would be soon decomposed, showing that the atmosphere was heavily charged with this element, which is now being so extensively used in lung and other troubles."

Hon. George W. Bishop, M. D., long a leading practitioner in one of the lower counties of the Eastern Shore, informed the writer that a case of consumption occurred some years ago in the person of an old lady who resided in the town in which he practised medicine, and "so rare and unusual was the disease in that locality, that many persons visited the patient from mere curiosity, to see what they had never before seen,—a case of consumption."

It would seem that the climate of this peninsular derives a great deal of its value from its neutral properties; from its being neither too hot nor too cold, and from its possessing neither the irritating qualities of a dry climate nor the depressing ones of an atmosphere surcharged with dampness. The atmosphere of the Eastern Shore is comparatively dry, and there are no fogs or piercing winds of any consequence. As at Nice and other winter resorts in the south of Europe, winds from various quarters sometimes sweep over the peninsular with considerable vehemence; but they are always of short duration, and never so severe as the *mistral* of Southern France and Italy, which sometimes lasts from three to nine days, and beneath which organized beings of any class shrink in dismay. Excessively cold winds are rarely felt on the peninsular, the westerly currents or cold winds from the Blue Ridge Mountains being considerably modified by passing over the waters of Chesapeake Bay. The warm winds

coming from the gulf stream, only about fifty miles distant, find uninterrupted admission and exert a permanent and highly beneficial influence, which cannot be overestimated, inasmuch as they serve to dry the soil and constantly bring fresh supplies of pure air, which serves to maintain the atmosphere in a healthful condition. The average number of rainy days on the Eastern shore is 83, and the average annual rain fall south of 39° north latitude is 34.25 inches.

In estimating climates according to their humidity, Vivenot, a German hydrologist, adopts the following classification:

1. Dry climate (a) Excessively dry, 1–55% relative humidity.
   (b) Moderately dry, 56–70% relative humidity.
2. Moist climate (a) Moderately moist, 71–85% relative humidity.
   (b) Excessively moist, 86–100% relative humidity.

The mean *relative humidity* of the Eastern Shore, representing the amount of water contained in the air at a given temperature, being about 56, it ranks as a "moderately dry" climate, and this is corroborated by other tests. Iron does nor rust easily and clothes dry rapidly in the open air. Lucifer matches do not readily become soft and useless, and wearing apparel rarely becomes limp under the influence of the ordinary atmosphere.

There can be no doubt that the waters of Chesapeake and Delaware Bays which flank the peninsular on the west and east respectively, and the Atlantic Ocean lying to the south of it, exercise considerable influence on its temperature. These circumstances, coupled with the peculiar course of the Gulf stream, and its near approach (fifty miles) to the coast line of Maryland, may be attributed the comparative mildness of the winters of the Eastern Shore, as compared with localities in the same latitude. In this connection, it should be remembered that in chronic diseases of the chest, it is the great heat producing organ that is involved, and that in measuring the amount of heat required in a given case, due allowance must be made for the deficiency, and no preconceived ideas concerning the asthenic nature of the disease should be permitted to seduce us into sending a poor exhausted invalid to freeze amid the snows of Minnesota or Colorado, or to swelter in the almost tropical climate of Florida.

Formerly the water supply of the peninsula was drawn almost entirely from shallow wells, and the water was necessarily of an inferior quality, containing, in addition to decomposed organic matter, in many instances, no doubt, the malarial bacilli of Tommasi Crudeli. But of late years this trouble, for the most part, has been overcome by the sinking of artesian wells, which afford an abundance of pure and healthful water, and, as a result, whole towns and districts where malaria used to manifest itself are now free from attack. In addition to the direct evidence as to the hygienic importance of pure water, there is a large amount of indirect evidence leading to the conclusion that most of the malaria that formerly existed among families on the Eastern Shore of Maryland was the direct result of using impure water. Certain it is, the locality is now comparatively free from malaria, and is, on the whole, a healthy place of residence.

With respect to the permanent residence of individuals, the Eastern Shore of Maryland offers many advantages. Land is cheap, easily cultivated and very productive; and with all there is a ready market in either Philadelphia, Baltimore or Washington City for every thing raised. The principal inducement for families to prefer a residence on the Eastern Shore, above most other places, are economy of living, proximity to the large cities of the East, the comparative facilities for the educating of children, and the easy, unrestrained and refined tone of society. And nowhere can one procure the luxuries of life, such as fish, oysters, clams, crabs, terrapins, ducks, fruits, melons, berries, etc., at so low a rate as on the peninsula; while house rent, the keep of carriages, horses, servants, etc., are in many of the towns little more than half the expense which they would be in other places.

KEELEYITE FALLS FROM GRACE—August Nelson, a well-known Swede, has been taking the Keeley drunk cure at the local institute. Tuesday he acted queerly, giving the impression that he was drinking again. During the night he left the city, taking with him two gold watches, a number of notes and money belonging to his sister, Mrs. William Sampson, with whom he boarded, the whole amounting to over $3,000.—*Chicago News-Record.*

AIKEN, SOUTH CAROLINA, AS A HEALTH RESORT FOR PHTHISIS.

By WALTER DAVIDSON BIDWELL, A.M., M.D.,
WASHINGTON, D.C.

IN discussing the advantages and disadvantages of any location as a health resort, the tendency is to dwell upon one or two features to the exclusion of others, perhaps of less importance, but still deserving of mention.

Moreover, the majority of our resorts are written up by those who have a pecuniary or social interest in the matter. But the writer of this paper is probably as free from bias as one can be, and the views herein expressed are partly the result of personal observation during a three months sojourn while suffering from chronic pneumonia, and partly the result of many conversations with residents of Aiken, and with physicians and others who have themselves, in pursuit of health, visited this and the other resorts throughout the country.

Having repeatedly visited Colorado and New Mexico, comparisons will naturally be made, but so far as possible these places, the proper subjects of other writers, will be avoided.

The essentials then of a resort for phthisical patients are: Accessibility, dry air, sunshine, freedom from wind, comfortable lodgings, good food, occupation for mind and body, and good medical attendance. Individual experiences may negative some of the statements in this article, but taking everything into consideration Aiken is a good place for consumptives, though far from perfection, even in those details which the hand of man can provide.

It is a twenty-two hours ride from Washington by the Richmond and Danvillea Rilroad, or by the Atlantic Coast Line, and one change of cars is necessary which ever route is selected. The trip can be made by an invalid with comparatively little fatigue.

It has been claimed that there is never any fog at Aiken, but this is a mistake, fogs are rare, but of their occasional occurrence the writer has had ocular demonstration. It has rained every day for a week at a time, and the accompanying table shows that rain is not a rarity, even during the "season." But the soil is so sandy, and the surface of the ground so rolling, that with its elevation of five hundred and sixty feet above the sea level, and one hundred miles between it and the sea-coast, Aiken fully deserves its reputation for dryness. Some people find this dryness very disagreeable, and suffer from parched lips and burned faces after two hours' exposure to the afternoon sun.

Statistics are very valuable in demonstrating facts, but are not, as a rule, very interesting reading matter, so but a few will be given.

It should be premised that this winter and spring have been rather more severe than the average over the whole country, and that Aiken shares the weather common to the whole region east of the Rocky Mountains, though her latitude sometimes renders the sudden changes less noticeable.

From December 18 to April 1, 1892, the record was as follows:

	Partly Cloudy.	Cloudy.	Rainy.	Clear.	Cold.	Snow.	Foggy.
Dec.	4	3	3	4			
Jan.	5	5	9	12	7	1	
Feb.	4	2	6	17	2		
Mar.	8	4	7	12	4		2

The principal hotel is open from November to June, and it is only between those periods that Aiken is desirable as a health resort, although invalids do remain the year round with benefit.

Any one who is curious may compare the records of Aiken with those of Colorado and California, and will find that some points in Colorado have as much or nearly as much sunshine as Aiken, while places in Southern California have a much larger percentage of clear and sunny days, but these places have other disadvantages, and when the sun does shine in Aiken more perfect days could not be conceived.

The prevalence of winds that create draughts and prevent the enjoyment of sunshine and fresh air is a great drawback to the Aiken climate, which is only partially offset by a protective arrangement of the wings of the hotel. As to their comparative prevalence at other resorts the writer is not prepared to speak.

Comfortable lodgings are a very essential feature to be considered in selecting a resort, and in speaking of Aiken, all buildings, except the principal hotel, may be excluded for these reasons. They are without elevators, and invalids cannot walk up and down stairs. Their piazza accommodation is limited to one or, at most, two exposures, and is very unpro-

tected, so that they are safe localities only when the wind is in a certain direction. Thirdly, with but one or two exceptions, the water-closets are located out of doors, a decided objection during inclement weather. For these and minor reasons, the Highland Park Hotel is the only available lodging for the phthisical patient.

Undoubtedly, the genial managers and the stockholders would be best pleased if it were stated that the hotel is all that could be desired, but as the readers of this article may themselves go to Aiken, or send patients there, they should know just what to expect.

The piazzas are pleasant and quite satisfactory, except for a scarcity of comfortable chairs and settees.

The two parlors are so hemmed in and deprived of ventilation that before the evening is over the air is stagnant, heavy, almost malodorous, or else there is such a whirlwind of draught that even healthy persons have to retire.

A reading-room, equipped with current magazines and periodicals, where ladies and gentlemen could read and write, would have been a godsend this past winter, especially on rainy days.

The individual rooms are quite satisfactory with their open fire-places and wood fires.

The table was excellent most of the time, but fell off in quality toward the end of the season, but the delays in waiting for meals detract greatly from this important feature. On at least two dozen occasions, there would be a delay of twenty minutes, and on one occasion the writer sat thirty-eight minutes before any food was brought. Occasionally, accidents will happen and one expects to wait, but where a waiter has only four people to serve, and is being regularly tipped, there must be a screw loose somewhere, if such things happen frequently.

By the way, the servants receive only moderate wages, with the expectation, doubtless, of making up a fair income from tips, and the service indicates the same. Only as tipping is freely and frequently indulged in, can anything like satisfactory attention be secured.

Board at the hotel costs from $17.50 to $35.00 a week, exclusive of extras, and beer, at twenty-five cents a bottle, indicates the condition of the wine list.

Some of these details about a hotel may seem like petty fault-finding, but it is satisfactory details of this nature that determine whether invalids will improve or deteriorate, and the cautious physician will not ignore them.

The walks, rides and drives through the pine woods are not only suitable to invalids, but charming to the lover of nature, and livery is cheap and quite satisfactory.

In the spring, the abundance of wild flowers tempts one to wander early and late. During stormy weather, however, one is driven back largely upon his own resources.

Aiken has also a number of physicians, and, without seeming to be invidious, one may mention the name of Dr. Geddings, who has made such a study of phthisis, and makes this his home, going to the White Mountains during the summer. His skill in diagnosis is as much appreciated by the writer as his courtesy and kindness during the past three months.

Summing up briefly, Aiken in winter has a milder and more congenial climate than can be found in the North, while it is more bracing and free from the malarial influences of localities in Georgia and Florida.

It is situated in the pine belt, but the reckless cutting down of the forest in the vicinity of the town will soon deprive the place of any advantage of this nature, if no steps are taken to check it.

The disadvantages connected with the hotel can easily be removed by a moderate outlay of capital, with a little sharper oversight of the service.

Altogether, it is as satisfactory a place for the winter as can be found in the Eastern portion of the United States, and it is to be hoped that another season will see it improved in the respects suggested.

THE PECOS VALLEY OF NEW MEXICO.

By W. THORNTON PARKER, M.D. (MUNICH), M.M., S.S.
BEVERLY, MASS.

THE extravagant enthusiasm which continued for some months concerning Koch's anti-tubercular remedy having subsided, we may be permitted to give our attention to the climate cure of pulmonary tuberculosis, or of phthisis, in general. Without attempting to prove that the Western Health Section is the

best climate for the cure of serious pulmonary diseases, I will call attention to the Pecos Valley of New Mexico, which has never yet been mentioned in any of our medical journals as a resort for pulmonary invalids. Some few years ago Lincoln county, New Mexico, was very well known as a region of desert land in a remote portion of the territory, inhabited by desperadoes, and too dangerous and undesirable for investigation, except by some large and well-armed body of men supplied with ammunition, food and water.

To-day all this is changed. Within three years, the desperadoes have been driven out, a beautiful town has been built, the land is being reclaimed by a superb system of irrigation, and the desert has been replaced by rich fields of almost every kind of produce, over two millions of dollars have been expended by men of vast experience, sound judgment, and rare business ability. A colony of sturdy Swiss and strong hearted energetic American farmers have come forward to improve the land and open up one of the most beautiful valleys in the territory, if not in the whole West. Eddy county, as it is now called, is that portion of the Pecos Valley to which we desire to call attention. It is to be found in the extreme southeastern portion of New Mexico, but is of such recent growth that any of these names referring to it fail to appear on any map of which I have knowledge. It is bounded on the east and south by the State of Texas.

The following clipping from *The Eddy Argus*, the local paper, gives a good description of its appearance:

> It embraces within its boundaries, mountains, hills, plains, valleys and meadows; streams, rivulets, springs, and the swift flowing Pecos river. No section of its area includes a greater variety of trees, shrubbery, or wild flowers that beautify its surface, or a greater diversity of climate, or soil capable of producing finer grains, grasses, vegetables or fruits. It is well watered by the Pecos river and its numerous tributaries. This river flows through the county in a southeasterly direction, and from the point at which it crosses the northern line until it passes the southern into Texas, several streams flow into it from a general westerly direction. Along these streams ranches and farms are located, all of which are productive, and some in a high state of cultivation.

It is reached by rail to Kansas City, Missouri, and westward to Newton, and then southerly through Oklahoma to Fort Worth, where, by taking the Texas Pacific Railroad, westward, to Pecos City, Texas, the Pecos Valley Road is reached for the direct journey to Eddy. Fort Worth can be reached more directly by way of St. Louis, or by the steamers to Galveston, Texas, and trains thence to Fort Worth.

The journey is interesting and can be made comfortable if a well-filled lunch basket accompanies the traveler. The life of a Western frontier town is generally a well-known evolution from isolated cabin to a nest of drinking saloons or gambling dens, and thence by more or less sanguinous history, to a miserable little hamlet called, in the grandiloquent language of the West, "City." Such is not the record of Eddy. Its founders were men of large means and of stirling character, and actuated by motives not wholly for the acquirement of wealth, a wonderful result has been obtained. The first thing done at Eddy was to build a sixty-five thousand dollar hotel, complete in every particular, even luxurious in its appointments, and with sewerage and plumbing of first-class character. Then a handsome block for banks, stores and offices, and afterwards other buildings and private residences. A fine court house is being built, and a Chicago millionaire has started another block and Masonic Temple. With an experience on the frontier, covering several years since 1887, from Minnesota to New Mexico, I have never seen or heard of anything like this, and even this imperfect description must reasonably excite doubts in the minds of many of my readers, as to its temperatures. School houses and churches followed quickly; the Episcopalians building the chancel and transept of a pretty stone church as a beginning. No saloons of any kind are allowed in Eddy; a clause in the deeds makes land so utilized, forfeited.

My theory for the climate cure is not merely basking in genial sunshine, which is almost constant at Eddy, but in actual occupation in the open air—something more than mere horseback riding, which, to my mind, is the best of any exercise.

It is possible in Eddy, to engage in light but profitable occupation—in raising small fruits, or in conducting a poultry farm, or in superintending a large farm for raising stock or produce. It is in this mental and bodily occupation where I have found actual cures, and these efforts

have been made soon after the arrival, by patients practically given up in the East.

With regard to the prerequisites in the climate cure, moderate elevation, dryness of atmosphere, abundance of sunlight, gentleness of climate—all these are found in profusion in this valley. The altitude of the town is at least 3,250 feet above the Gulf of Mexico, and 800 miles distant from the salt water. The temperature rarely falls below and seldom reaches 32° F. in winter, or rises above or even reaches 100° in the summer. The average temperature is 63°. The atmosphere is light, dry, highly rarified, and we may say, absolutely pure. Its tonic and remarkably agreeable character is readily appreciated.

Within 90 miles of the Texan lines, the grand influence of the mountain currents, fresh from the noble Guadaloupe range, is recognized. For 325 days in the year, the rays of the sun are unobstructed. The summer days are warm, and the nights are cool and refreshing. In fact, this section combines every climatic requisite of altitude, equitable temperature, absence of malaria, and abundance of ozone and electricity.

From a private letter I extract the following:

"Should a higher altitude, however, appear more desirable to you, there is the Geyser Springs, located 38 miles distant from Eddy, at the base of the highest peak of the Guadaloupe Mountains, 5,000 feet above the Gulf level. The waters of the spring are said to possess some medicinal virtues; for this I can not vouch, as I have never tried them nor had them analyzed. But the climate is delightful, and the view down the valley simply magnificent.

"This spring is at the head of Black river, and from this point—altitude 5,000 feet, Eddy, 3,250 feet—to the junction of the Black and Pecos rivers, 18 miles south, altitude 2,800 feet, one has a choice of elevations, and may select a site by the river side, on the high, dry mesas, or at the base of the lofty Guadaloupes. So much for the climatic advantages. You have probably already learned that Eddy is the headquarters of one of, if not the largest, irrigating enterprises on the American Continent.

"A mammoth dam, 1,600 feet in length, has been built across the Pecos river, eight miles above Eddy. It is 200 feet wide at its base, 30 feet at the top, and impounds 1,000,000,000 cubic feet of water. It is the supply of two large canals, whose waters will irrigate 240,000 acres of fertile land, 25,000 being placed under irrigation since the first of April. The headquarters of the company is at the town of Eddy. Two years ago, there was not a house on its site."

The inhabitants are without the slightest suspicion of flattery, a really superior gathering of people, mostly from New England and the Middle States.

The climatic advantages of this section are so excellent and so genuine, that we may here safely send our patients.

The climate cure has been my conviction for many years, and although the study of climatology has brought from my pen many articles concerning the Western health section, I have never written with more satisfaction than when describing the true worth of this beautiful Pecos Valley.

THE SOUTHERN ROCKY MOUNTAIN REGION AS HEALTH RESORTS FOR CONSUMPTIVES.

By W. N. SHERMAN, M.D., PH.D., F.R.M.S.,
MERCED, CALIFORNIA.

DURING a residence of five years in New Mexico and three years in Arizona, the writer has had ample opportunity to observe the climate and conditions of the various towns and localities of that region—in central New Mexico and Northern Arizona, from the Rio Grande Valley to the Pacific Ocean, and on or near the thirty-fifth parallel line between said localities.

In a short article it is impossible to give all the points that is necessary to satisfy those desiring information concerning this large area.

As the majority of people seeking health travel only by rail, the writer will speak particularly of such points as are on the railroad, or accessible by stage from principal points.

The invalid, to reach this region of the Rockies, must take the great Santa Fé Route. Let us suppose he is starting from Chicago. It makes little difference what season of the year he chooses after reaching the Colorado line. The first place of importance in New Mexico is the thriving city of Las Vegas (Spanish for the Meadows), where he may visit the famous hot springs. After leaving here

comes the climb over the Glorietta Mountains, and on down into the Rio Grande Valley, gradually descending as the railroad goes through the valley. At Lamy Junction, there is a short branch going up to an altitude of about seven thousand feet, to the ancient city, Santa Fé, a nice place for a summer residence.

Further south, is the thriving, bustling little city of Albuquerque, where the railroad diverges, one branch going south to the City of Mexico and the gulf at Guymas, and the other reaching out westward to Southern California.

From this point south to El Paso, Texas, he can not go far amiss to choose any point for a winter residence—the climate of winter and summer being some warmer as one goes down the valley from high to low altitude. Socorro, Las Cruces, and the city of El Paso are the important towns in the valley south of Albuquerque, the commercial and railroad center of New Nexico, and the finest and largest city. The elevation above sea level is about five thousand feet, and for an "all the year round" climate it is not surpassed in the valley.

The hotel accommodations are the best between Kansas City and Los Angeles—the Armijo and San Felipe being the finest.

If the invalid desires a permanent residence in New Mexico, he need look no further; if, however, he is going further South or West, it is good for him to stop off here and get a rest and a breath of fresh air. Many people are injured by the rapid changes from the East to the West. The ideal way is the old way, in a wagon from the Missouri river to destination.

Albuquerque is peopled with an energetic, generous, and hospitable class of Americans, the new city being about one mile from the old Mexican village. It would be a fine place for some enterprising or charitable person to establish a home or sanitarium for consumptives, and would, no doubt, receive the hearty co-operation of its citizens. Its climate is a happy medium between the two extremes—it is neither hot in summer nor cold in winter. I have no record of temperature, but will say that there are few (very few) days during the whole year when one can not live in the open air and the sunshine. An occasional sand storm is the only unpleasant feature, and it is of short duration.

All this region possesses, as it were, that one great essential factor for the relief and cure of consumption, asthma, bronchitis, etc., and that is dryness. In my judgment, it is unsurpassed in the civilized world for the treatment of the diseases mentioned—an immense, natural sanitarium. It presents localities suited to individual cases, and yet there is that same quality of dryness in all localities.

Rarely one sees a case of consumption among the natives of the country. I do not remember of ever seeing a case of acquired consumption among them. This dryness of the air in winter and summer, in the day-time and the night-time, is incessant, and an ever present quality, except, possibly, the rainy season, which comes in June and July of each year, and without any regularity or precipitation, rarely exceeding two inches in the year, and often falling below one inch for the entire season. The rain comes usually with an afternoon shower, lasting an hour or two and followed by sunshine. The roads are always good—dry in winter and dusty in summer. One may use a buggy or a bicycle the year round.

The summers are not extremely warm; while the thermometer often rises high, the heat is not oppressive, being modified by its extreme dryness. A temperature of 100° is probably not as oppressive here as 85° in the East, or where there exists greater humidity. Eastern people do not understand this, and they must experience it to believe it. No matter how warm the day, it is always cool in the shade and hot in the sun; the nights are simply delightful, and one may never suffer loss of sleep from heat. There are no damp winds—it is almost perpetual sunshine and cloudless skies.

Aside from the larger towns, one will not find the accommodations so good as in the East, or the resorts so comfortable or elaborate. For those who desire the study of the oriental customs of the natives, or to collect ancient relics and curios, this is a rich field. Fruits and cereals are raised in abundance along the valley; while, to the east and west, the pursuits are pastoral and mining.

Should one tire of the climate of the Rio Grande Valley, let him take the Atlantic and Pacific branch of the Santa Fé Railroad, from Albuquerque to Los Angeles, remembering that this is a country

not only of great wonders, but magnificent distances.

Splendid opportunities are offered for those desiring to fish and hunt, and, by the way, it is the writer's opinion that the life called "roughing it" is in many cases the most beneficial. If one desires a trip of this character, let them outfit at some railroad point and go on camping excursions to the mountains, always choosing the summer season, say from May to October. From Albuquerque one may choose the mountains to the east. From Socorro a nice trip would be to go west over good roads, starting from Magdalena, thirty miles west of Socorro on branch road, and going into the Datyl Mountains, from here on through valleys and mountains across the Arizona line, and into round valley at Springerville, Apache Co., Arizona. At this point you are at the base of the famous White Mountains of Arizona; good fishing, elk, deer, bear and antelope. From here one may go direct, or via the county seat, St. Johns, to Holbrook, Arizona, on the line of the A. & P. R. R. (from Albuque to Los Angeles), and by following the railroad west eighty miles you strike the summit of the San Francisco mountains at Flagstaff, Arizona

About one hundred and fifty miles west of Albuquerque the railroad crosses the continental divide (at an elevation of seven thousand feet) and enters the territory of Arizona. One desends for one hundred miles and then goes up into the pine forests of the San Francisco mountains, and at its summit enters the thriving town of Flagstaff. This is another good place to rest, and it is always cool enough to sleep under one or two pairs of heavy woolen blankets. There are good hotels here, and the air is laden with the balsamic odor of the pines, an additional healing quality and tonic added to its dryness.

The elevation here is about seven thousand feet, and if the traveler has any organic heart disease he had better not stop at so high an altitude. From here there is a good stage line, through a magnificent country, to that greatest of all natural wonders, the Grand Canon of the Colorado, where you will find a grandly magnificent natural sanitarium, protected by massive walls of granite, and covered by a cloudless sky. Here one may spend the winter months among nature's wonders, surrounded by snow-capped walls a mile high. When this locality becomes accessible by rail it will become the ideal winter resort for people with weak lungs, seeking a dry, warm winter climate. Winter in the canyon, and summer on its rim, is a perfect combination for the invalid.

From Flagstaff one may travel by rail down to Prescott, a mining town, and the old capital of Arizona, and from here he may seek a winter residence further down at Phœnix. This is a large, thrifty little city, the present capital. It has a delightful winter climate, and is the center of the finest agricultural section of all Arizona. It has connections by rail north and south with two trans continental lines, the Atlantic and Pacific (Santa Fé), and the Southern Pacific (Sunset route). Phœnix and Tucson are both blessed with the warmest winter climate of any place in Arizona. From an elevation of seven thousand feet at Flagstaff the railroad goes down again for three hundred miles to the Needles, California, just across the Arizona line, at the entrance to the great Mohawk desert. It has a fine winter climate; warm, dry and stimulating.

The altitude is about three hundred feet above sea level. Here one gets in summer the hot winds from the desert, and we advise any one desirous of trying the hot air cure for tuberculosis to try the summer at this point. From here one passes over the desert at various altitudes, now five hundred feet and in two hours two thousand feet, until finally we enter the green valleys of Southern California, and get a refreshing sniff of the moist sea breeze.

The curative qualitives of the atmosphere of the various localities of the southern rocky mountain region exists not alone in its dry tonic properties, but through the mechanical expansion and development it produces gradually and unconsciously in those who breathe it. Most all persons, after a year's residence, will find an increase of from two to three inches in their chest measure. This fact precludes the possibility of atelectasis.

I believe also that this atmosphere is a germ destroyer. Its very dryness antagonizes the life and sporulation of all germs, which depend largely on moisture for their existence.

I have observed that wounds heal quickly and under very unfavorable con-

ditions. Cholera infantum is almost unknown; summer diarrhœas are rare; there is no malaria; little typhoid, and rarely dysentery. I imagine that when the world knows of these wonderful localities, and properly appreciate their advantages, there will be thousands cured where there are now hundreds. It seems strange to see annually hundreds rushing past these favored places to reach a climate by far its inferior. Flowers and verdure, and warm damp air, and fruits, and vegetables, and the comforts of elegant homes and fine hotels are all very attractive, but, alas, are they the things that are needed?

These thoughts are hastily penned, some good locations and special details are omitted from lack of time and space.

LAS VEGAS, NEW MEXICO.

By FRANCIS H. ATKINS, M.D.,
LAS VEGAS, NEW MEXICO.

NEW MEXICO is rapidly taking its rightful place as a most important resort for consumptives; it differs from Colorado, so much better known, only in being farther south; in having less beautiful scenery, and in its towns being less handsomely built.

While the plains of the East and South, with altitudes from three thousand six hundred to four thousand eight hundred feet, afford some approach to the summer heat and winter mildness pictured in the minds of those who erroneously suppose the climate and productions of Las Vegas and Albuquerque to be about the same as those of Vera Cruz, Mexico. The mountain skirts, with elevations of six thousand to seven thousand feet, have cool summers and rather cold winters. This must be understood to prevent the advanced victims of phthisis, with large involvement of lung tissue, high pulse, constant fever, a sensitive skin, from seeking relief in these higher altitudes, especially in winter.

Las Vegas, well north in the territory, stands at the junction of mountain and plain, at an altitude of six thousand four hundred and fifty feet, in a perfectly dry country; wholly free from malaria and those insect pests that harass invalids elsewhere, fleas and mosquitoes. It is a well regulated town of about six thousand inhabitants, with electricity, water, telephone, etc., a good opera house, numerous churches, and schools, and hotels. Its accommodations for invalids are good, and steadily improving. Five miles mountainward are the Las Vegas Hot Springs, with a sumptuous hotel offering every elegance to wealthy guests, and a smaller and less expensive inn near by. Bath houses afford Turkish, mud and other baths. A branch railroad has frequent trains to this pleasant nook.

Las Vegas is on the main line of the A. T. and Santa Fé Railroad, forty-four hours from Chicago.

The climate though dry is not equable, but being so dry the changes in temperature are not inimical to the delicate, as in moist climes. Rain falls only between April and October, total precipitation from twelve to twenty inches per annum. About half the winters are nearly free from snow, and the temperature reaching zero but once or twice. Other seasons tolerably heavy falls of snow occur in December and January, and are accompanied by temperatures as low as 12 to 18 below zero at night, but the air is still and dry, and good health prevails. These snows do not lie long upon the earth. Neither the snow nor the cold are detrimental to the favorable progress of those invalids who only ought to be here through the winter, namely those who are still well enough to get about out of doors and who can react to the fine stimulus of the cold, dry air.

The milder winters are more like March, April and May at the East, but drier. The mean annual relative humidity is about 45.

The only climatic annoyance is the dust, which is inevitable to a dry climate. But Las Vegas does just as Colorado Springs, Los Angeles and San Jose do, sprinkles her streets in dusty weather. On the ranches and in the mountains the dust is hardly to be noticed. After all, where it exists it is only a personal nuisance and appears to have no unpleasant effect on the phthisical.

It has been taken for granted so far in this brief New Mexican sketch, that every Eastern physician knows that this dry Southwest has proved over and over again, these forty years past, its capacity to check the ravages of pulmonary phthisis in persons who are not already hopelessly diseased. Frequent examples are seen in Las Vegas. It is quite common to find both male and female consumptives supporting themselves here. Of course, if

large numbers were to come at once, the possibility of self-support might vanish from over-supply. Small capital often finds opportunity for successful investment, but either in personal work or as investors much seems to depend on the individual capacity of the visitor, the bright ones catching the plums. The writer thinks of many who easily secure an income here, at least enough to keep up the daily bread.

The finest water in the world and the queerest are to be found in New Mexico. Las Vegas gets its water from a mountain stream, and, excepting during a low stage in midsummer, it is excellent water.

Board ranges in the better sort of boarding houses and hotels from ten dollars a week upwards. Living generally is higher than in the States.

The summers are so delightful at Las Vegas that we wonder tourists do not come here as they would go to the mountains of New Hampshire. The tempera ture rarely reaches 90°, never 100. The evenings are generally cool enough to make sitting out doors without wraps undesirable. Warm nights are unknown. Wind and dust are absent. The weather office agents report far less wind in New Mexico than in the Mississippi Valley or the Atlantic coast cities. No cyclone has ever been known in New Mexico.

SOUTHERN PINES, N. C.

By WILLIAM F. WAUGH, M.D.

THIS new resort is in some respects ideally located as a resort for consumptives. It is the highest point of the sandy section of North Carolina, in the heart of the long leaf pine district. The sand here is over seventy feet in depth, providing the best possible drainage. The rainfall is small, and the water so quickly absorbed that invalids can go out without overshoes as soon as the rain ceases. The temperature scarcely ever sinks in winter to the point of frost. The country is covered thinly with the pines, and very little underbrush is to be seen, so that one can walk for miles without touching the foot to vegetation. This gives one of the chief advantages, a pure air, free from all malarial or other disease germs that require decaying vegetation for their development. The water is pure. The place is located on the Seaboard and Roanoke Railway, about ninety miles south of Raleigh. From the north the best way to reach Southern Pines is by Baltimore, taking the night boat to Portsmouth, and thence by rail. Whether the emanations from the pines are of special value I leave my readers to decide.

The first impressions on getting out at Southern Pines are decidedly discouraging. One has perhaps formed an idea of the place from the pine forests of the North, where the sun only penetrates the shady depths by some stray arrow of light, and under foot is a soft carpet of the fallen pine needles. Here one looks out on a scene suggestive of a half burned, half-cleared Jersey barren. The pines number from twenty-five to fifty to the acre—all the land will sustain—and as they have been repeatedly barked for turpentine, the trees have rather a ghostly aspect. Some underbrush is visible, scrub oak, etc., but not much. We step out into the sand, and find it pleasant to walk over, while we can see a considerable distance before the trees obstruct the view. Nevertheless, a little reflection shows that this rather dreary region is better for our purpose than the ideal forest. The latter shuts out light and air; two essentials to consumptives. Luxuriant vegetation gives food for germs, breeds malaria, and poisons the water.

This long-leaf pine region, as we see it here, stretches for fifty miles to the north and south. It would be indeed the ideal resort for consumptives, provided they were scattered over this region in isolated cottages, with central depots from which they could be fed and cared for. Permit me here to enter my decided objections against the hospital, hotel, asylum, or sanatorium for tuberculous people; places, all of them, that are bound to become in time polluted with tubercle bacilli, so that no healthy person will be safe in them. I am well aware that this may be avoided by destroying the sputa, but *is this done?* Is there a solitary resort known where patients are obliged to carry about cuspadores and have their contents burnt? Until this is done no locality can long fail in becoming a pest-hole where consumptives resort in great numbers. This is why the consumption-free zone is steadily retreating to the West, as wave after wave of phthisicals come to each freshly "boomed" resort, to pollute its

atmosphere, and impregnate its dust with bacilli.

The opening of Southern Pines is due to Mr. Patrick, formerly Commissioner of Immigration to the State of North Carolina. Professor W. C. Kerr, State Geologist, had reported that Southern Pines was the highest spot on the sand ridge, being six hundred feet above sea-level, and that the climate closely resembled that of Florence, Italy. The mean annual temperature of the Pines is 58°; that of summer 77°, and of winter 44°; while the figures for Florence are 59, 75 and 44. The average minimum temperature in winter is 13°, a record of 10° being rare east of the Blue Ridge.

Acting upon this data, Mr. Patrick proceeded to exploit the virtues of Southern Pines; which he has done so successfully, that last winter saw the town inundated with double the number of visitors its five hotels could accommodate. Nearly every house in the town was called upon to open its doors to health-seekers from the North. This fact, when so many owners of health resorts are racking their brains to devise ways to attract visitors, speaks volumes for the Pines. Most of the citizens are persons who originally came from the North in quest of health, and, finding it here, concluded to make this their permanent home. One effect of this movement has been the development of several industries for which the sandy barrens were not previously thought to be suited. Grapes, strawberries and a number of small fruits and vegetables have been found to flourish in this soil, and already no small quantity of such produce is shipped to the Raleigh markets.

W. C. Kerr, late State Geologist of North Carolina, thus sums up the advantages of Southern Pines. He says:

1. That its winter climate is sufficiently mild for a very large class of invalids who now go to Florida or Aiken, because they know of no suitable locality nearer.

2. That it has the most perfect drainage possible, being a high sand bank, which is never wet except when the rain falls.

3. That it has an elevation of six hundred feet, much greater than any similar pine woods region, which is an important item in determining the condition of a resort for invalids with weak or diseased lungs.

4. That it is within the sweep of the influences of the Gulf Stream, to which it owes much of the mildness and equality of its climate.

5. That it is situated in the midst of a *vast forest of long-leaf pine*, the atmosphere of which exercises a beneficial and curative influence in all affections of the air passages.

6. That it is within twenty hours of New York, so that a multitude of people in the Northern cities who are not able to leave their business for the whole winter, and only need to escape from three or four, or perhaps half a dozen severe storms, can do so by running down to Southern Pines.

Whatever may be the dangers of infection in the older resorts, there is none as yet at Southern Pines; and if its development be conducted along the lines herein suggested, there need never be such danger. A log hut can be built there for $25.00. Add the same sum for conveniences and furniture, and it will be seen that the system of isolated habitations for consumptives is much less expensive than the palatial hotel; while the hut can be burnt without much loss when the patient has no further use for it.

READING (PA.) AS A HEALTH RESORT.

By F. W. FRANKHAUSER, M.D.

READING, the fourth largest city of Pennsylvania, located upon a beautiful slope, with the Neversink and Mount Penn Mountains on the east, Schuylkill river on the south and west, and a beautiful undulating country to the west and northwest.

Reading has now a population of 70,000 and covers an area of 5,000 acres, a water front on the Schuylkill available for manufacturing rights of fully five miles. The daily supply of pure spring water is over 4,000,000 gallons daily, with a storage capacity of over 100,000,000 gallons.

Wide streets running parallel, business places large, with a full supply of every thing required by visitors at a fair price. Our people are hospitable, as can be ascertained by the number of organizations holding their reunions in this city every year. Our people are mostly of a German descent, and have brought their sociability from their ancestors to the present time. The location of the city on the main line of the Philadelphia and Reading Railroad with branches to Allentown and the East. Harrisburg, Lancaster and West; Potts-

ville, Williamsport and the North; Pennsylvania Schuylkill Valley, branch of Pennsylvania Railroad; Wilmington and Northern Railroad to Wilmington, Delaware; also Berks and Lehigh, connecting with Slatington. As a railroad center it is unrivaled. Its facilities for transportation of all kinds is all that could be desired.

The city of Reading contains the principal part of the mechanical department of the Philadelphia and Reading Railroad; all kinds of industries are carried on successfully in this city. The customs and characteristics of the people are German, but the population of native born is increasing rapidly, and statistics show there are less than 6,000 foreign births in the city. There are about forty building associations in this city, consequently more mechanics and laborers own their own houses than in any other city of its size.

Reading is one and one-half hours ride by train to Philadelphia, three and one-half hours ride from New York.

Reading is as free from malaria as any city of its size can be. There are some low grades of fever, with some malaria poisoning, making them of a low grade, and a continuous type in some of the lower parts of the city, but the higher parts and mountains are certainly free from any malarial tendency.

The death rate of the city of Reading is very low, being 17.06 per 1,000,[1] on a basis of 60,000, but the directory for the city of Reading for 1892 gives the city a population of 70,000, basing the death rate on 65,000 it would be 16.02. Reading has been free from any epidemic for a number of years (excepting influenza, which has been general). The drainage is good, with a good supply of water to all parts of the city, which is obtained from springs and streams.

Reading has two parks, one at the head of Penn street containing fifty-three acres, with its fountains and springs. A fine spring containing the sulphate of iron in solution, with quite a chalybeate taste. Many persons may be seen daily going to and from the springs to obtain a drink, or to carry home a bucketful of this cool and invigorating water for drinking purposes for the family.

A large spring is located in the northern part of the park, covered with a pavilion, to which thousands of persons go during the summer season to obtain some of nature's beverage.

The park is well laid out. The sides of the walks and drives are planted with trees; seats are placed in many shady nooks where the weary person may rest and enjoy the cool breezes that pass over that part of the park.

The Mineral Spring Park, located one mile east of the City Park, and which can be reached by two street car lines, needs only to be seen to be appreciated; its springs, with its stream of water flowing through it as it leaps over the rocks, forming miniature water falls, making it a pleasant place for the student, or the tired and weary. It is well shaded, having many pavilions, rustic in their character and appearances.

Mineral Spring Park is the Mecca for the people of Reading who want a day's recreation.

Reading is well supplied with hotels. As summer resorts a number of hotels have been erected on the mountains, among which are the Neversink, Highland House, Summit Hotel, Woodvale Hotel, Klapperthal Hotel, Black Bear Hotel, Mineral Spring Hotel.

Neversink Hotel is located on the highest peak of the Neversink Mountain, 1,000 feet above the level of the sea, two miles from the city limits, and is reached by the Neversink Mountain Electric Railroad. The hotel is 360 feet long, 40 feet wide, 5 stories high, containing 250 rooms, a piazza, 14 feet wide, extends all around the building, making a promenade of over 800 feet. The hotel is heated by steam and open hearth.

The sunlight entering the rooms, ventilating and sanitary arrangements are as nearly perfect as can be made; an artesian well supplies the hotel with pure well water.

Some of the finest views in the world can be seen from the top of the hotel; the city of Reading with its smoke stacks from many places of manufactures where run thousands of spindles and hammers responding to the impulses of the sturdy mechanics of Reading.

The whole view from the hotel is as a kaleidoscope, in whatever direction the eye may be directed are new points of interest. There is no sameness, but a continual change, causing a constant relief to the

[1] Board of Health report of city of Reading, 1892.

eye, and the mind is awakened to wonder and amazement.

The Schuylkill river, winding along the base of the mountains, can be seen for miles as it flows in its course onward to meet the waters of the Delaware.

The river is full of fish, and gives ample amusement to those who are inclined to while away their time in waiting for a nibble. Bass, sunfish, salmon have been put into the river, and in a few years it will be one of the places so frequently visited by the sportsmen.

Klapperthal is a romantic glen along the southern slope of the Neversink Mountain, the peculiar sound of the rippling stream as it flows on to its larger reminds us of some fairy land or place. All that can be done to make it attractive and comfortable has been done. A large hotel adorns the glen.

The Highland House, the first hotel that was built on the mountain, occupies the northwestern point of Neversink Mountain. Has some fine drives and many paths leading to different points of interest. It is reached by the Neversink Electric Railroad, and by an incline railroad. Water is furnished by an artesian well, in abundance. It is a large and well furnished place for the service of its patrons.

Woodvale Hotel, another caterer for public favor, is located at junction of Black Bear Electric Railroad and Stony Creek Railroad, two miles from the city by railroad ; is at a quiet part of the grove surrounding it, with all the surroundings as pleasant and comfortable as can be.

The Summit House, on Mt. Penn Gravity Railroad, is one thousand one hundred feet above the sea level; for beauty of scenery it cannot be excelled. One of the most beautiful views is when reaching the top of Mt Penn by the Mt. Penn Gravity Railroad, the city appears as a panorama. In an instant, as it were, the city, which has been hid by the trees, appears as though it had tried to hide itself and at once comes forth in all its beauty and grandeur. The fine indulating farming and manufacturing country, the Blue Ridge Mountains at a distance, which seem to be the border of the picture, spread before you.

It has often been said during the year, "Why go to the sea-shore?" when Reading has so many places free from the hot air, free from mosquitoes, free from malaria, with abundance of fresh food, milk and butter fresh from the farms adjoining. Whilst Reading does not have the salt air of the sea-shore, it does have an abundance of fresh air, loaded with ozone, and whilst in valleys the temperature has ranged as high as 100° F., it has not reached above 80° on the mountains, with always a breeze blowing.

As for rest, which so many persons need, Reading has all that can be desired, and yet enjoy city life. We are certain that the time is very close at hand when Reading shall rank as one of the first summer resorts in the land. Come and try it, and be convinced.

BENZOATE OF SODA IN THERAPEUTICS. —Dr. Liégeois has written an exhaustive paper on the value of benzoate of soda in therapeutics ; he considers this agent as of the greatest importance in the affections below named, provided that it is given in large doses. The pain, dysphagia, and inflammation of the pharynx in the common sore throat are favorably modified and cured in two or three days by the administration of one drachm in children, and three drachms in adults, of benzoate of soda daily. In diphtheria it is certainly of service either internally or in insufflation, but is not equal to applications of salicylic acid. In laryngitis and the ordinary acute bronchitis M. Liégeois considers it as a good expectorant when given at the onset ; he prescribes it as follows :

℞.—Benzoate of soda..... ʒj.
Tinct. of aconite..... ♏.xx.
Cherry laurel water..... ʒj.
Syrup of tolu,
Syrup of codein.....āā ʒij.
Water..... ʒij.
To be taken in the twenty-four hours.

Associated with tannin, benzoate of soda gives good results in Bright's disease, if persevered in.

℞.—Benzoate of soda,
Tannin.....āā ʒiss.
Ext. of gentian.....q.s.
Divide into 100 pills—6 daily.

Given in small doses in uric acid gravel it transforms the insoluble urates into soluble hippurates, and thus eliminates it from the urine. As a cholagogue benzoate of soda occupies the first rank; he associated it with salicylate of soda and rhubarb.

℞.—Benzoate of soda,
Salicylate of soda,
Rhubarb (powdered),.....āā ʒj.
Nux vomica (powdered)..... x grs.
Divide into 20 powders—two daily.

—*Med. Press.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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JOHN L. SULLIVAN AND HIS WATERLOO.

THE recent gladiatorial combat in New Orleans, which terminated so disastrously to one of the greatest prize fighters, though viewed by many with expressions of horror and disgust, nevertheless is not without its lesson to those interested in the development and decadence of human vigor, and by these, too, notwithstanding the fierce and relentless condemnation of that art, through which one human being is enabled to disable or kill outright his fellowman.

This event again demonstrates that however great any one's mental or physical development may be, there are plenty of his equal if they are sought out; and further, that there is a limit to these endowments, which, when over-reached, are certain to lead to inevitable ruin. This is not only true of the corporeal man, but the physiological also. Walter Scott earned a million of dollars in ten years with his pen. Retiring, he soon met with financial disaster, and became a bankrupt.

Again he betook himself to writing to recoup his lost fortunes, but the spell was broken. His productions now were but weak repetitions too thinly disguised, and he utterly failed; a physical wreck; broken down in spirit and a paralytic; so that he, the greatest of literary giants, succumbed at last in endeavoring to do that which is only permitted of the youthful and vigorous. Let us remember then, that each man has his season, and but one, when he may apply his energies with impunity. That past never returns.

From the humanitarian standpoint, we must confess that we cannot agree with those who would totally suppress prize fighting and other feats of courage and strength. Man was born to fight. The Nation wants men who are not afraid of the sight of blood or the smell of gun powder.

Fifty thousand dollars is a large sum to give a man for punching his neighbor's nose for a few minutes. But what is it in comparison with the rewards which our ancient and modern scientific murderers, called soldiers, received, whose only claim to the Nation which they govern, or the millions of acres which they own, is that their ancestors died as prize fighters of large proportions, using knives and gun powder, slaughtering thousands of their fellowmen?

Yes; we must have fighters. Money, large possessions, immense forts and battle ships have a place in the event of war; but they won't take the place of flesh and bones, courage and intrepidity. Soldiers, warriors and fighters we must have, even though it cost the Government or individuals thousands or millions to make them.

T. H. M.

BUSINESS HABITS.

IT is a notorious fact that, taken as a class, medical men are exceedingly negligent in business affairs. They are negligent in the management of the financial part of their profession. They will not collect moneys due them with that promptness which is characteristic of every business. We have seen this trait carried so far that a practitioner actually refused to accept the money tendered to him, preferring to wait until the end

of the year in order to collect a larger bill. This is not "business" and, to a man engaged in mercantile pursuits, it appears very strange. This custom, however, has grown to such an extent that the majority of patients regard it as very strange when a physician renders a monthly account for services rendered; yet, these very same people will pay cash for shoes, clothing or the other necessaries of life and look upon the proceeding as a very natural one. The result of the whole matter is that the negligent physician, and this class constitutes the majority, waits a year to collect his bill, and in many instances is importuned to "shave" it, and gets less than if he had insisted upon collecting his accounts every month, when each one was comparatively a trifle. —*Weekly Med. Review.*

Unfortunately, the physician cannot help himself. The nature of his business is such that his heaviest demands on his customers occur at the time the latter are least able to meet them; when the application of the ordinary rules of business would work a hardship in many cases amounting to inhumanity. While the physician who watches the little things, little bills, and collects promptly when he can, will keep at least even with the world and perhaps keep up his life insurances, it is about all he can do; any pecuniary success beyond this is only attained at the cost of moral or professional character, except in specialist practice. The only possible solution of the difficulty lies in the nationalist principle: restoring to the profession that State support that alone renders a professional life possible.

Annotations.

THE DEADLY PARALLEL.

IN localized pruritus the most effective remedy is benzoin. The ointment may be prepared according to the following formula:

℞.—Benzoini, pulv. finiss..... gr. xx–lx.
Hydrargyri ammoniat..... gr. xxx.
Lanolini..... ℥j.—M.

When in pruritus ani the itching is intense, painting the surface with tincture of benzoin kills the itching with a suddenness that has no parallel. The application is quite irritating, however, and accordingly it is best to dilute it. * * *

—W. F. Waugh, in TIMES AND REGISTER, March 5, 1892, page 233.

PRURITUS.—Dr. Waugh (*Med. Neuigkeiten*, Nov. 25, 1892), recommends in those forms of pruritus where there is no general disease at the bottom of the affection, the use of the tincture of benzoin, and in the following manner:

℞.—Gum of benzoin..... gms. 1.5–3. (grs. xxiv–xlv).
Ammoniate of mercury..... gms. 1.5. (grs. xxiv).
Lanolin..... gms. 2.0. (grs. xxx).

Rubbing the skin with the officinal tincture of benzoin will quickly remove the pruritus, yet on account of its causing irritation it is advisable to thin it.

[A Danish physician has recently reported a case which he cured with the use of the lithiates. The urates were found in excess in the urine. An Italian journal lately contained a lengthy article on the value of the arseniate of soda in universal pruritus. The Italians often prescribe a mineral water containing the arseniate of soda in relatively large quantities, the Cerasole Reale water.—Transl.]

—*Lancet-Clinic.*

THE great British weeklies still roll their journals, instead of sending them folded, as THE TIMES AND REGISTER and all other first-class journals do. We suppose the reason is that British medical men are long-suffering and patient under unnecessary inflictions, or that, never having known anything better,

they go on taking a journal whose leaves must be anchored down with a dozen paper-weights, before it can be perused.

THE *Lancet*, of September 3, appears as a "Student's Number," devoted exclusively to such information as will be needed by any one entering the study of medicine in Great Britain or its dependencies. The requirements of foreign countries in regard to immigrant practitioners are given, we trust, more accurately than that of Pennsylvania. For this State, the *Lancet* says: "Diploma to be endorsed by some medical college in the State, and then registered by a county prothonotary. Fee, $1.00." The somewhat important fact is omitted that the State colleges are forbidden to endorse the diploma without first examining the applicant as to his fitness, and that for this, a fee of $25.00 or upwards is charged, not returnable in case of failure.

"SPECIAL NUMBERS."

IMITATION is the sincerest flattery. *The Medical World* has adopted the special number idea, and each of its issues is now a special, and a very good special, too. *The Brooklyn Medical Journal* sends out, on September 10, a special edition, entirely devoted to cholera, giving a report of the proceedings of a special meeting of the Medical Society of the County of Kings, held September 6. This shows commendable enterprise on the part of the Society, as well as of the *Journal*.

The Medical News devotes most of the issue of September 10 to cholera papers from Shakespeare, Abbott, Osler, Curtin, and Hartshorne, and two editorials.

The Philadelphia County Medical Society announced a special discussion on cholera for the 14th inst.

Letters to the Editor.

THE TENNESSEE MOUNTAIN REGION.

MORRISTOWN, Tennessee, is a well lighted, paved, watered town of 4,000 inhabitants, situated 1,400 feet above the sea level, on the summit of Bays Mountain; lying between the 35½° and 36° of latitude and the 82° and 83° longitude west from Greenwich. Splendid railroad facilities; fifteen daily mails; good schools; one opera house; seven churches; surrounding country productive; two hotels, but neither extra good; numerous boarding-houses; nice drives with excellent livery facilities at low prices. There are no fogs, no dust, no "blizzards" or "northers," refreshing breezes, but no winds or cyclones.

Living is very cheap. Hotels charge $5.00 to $8.00 per week; boarding-houses $2.50 to $5.00. House rents are from $5.00 to $15.00 per month, for cottages of three to ten rooms. Ten or twelve industries; a thousand to fifteen hundred dollars of capital will start a good employment.

An unassuming population with wealth equally distributed. An hour's drive from three of the largest rivers in the State; country thinly settled; good fishing, boating and hunting. There is an average of twenty-seven clear days in the month. The climate seems to be more suitable to affections of the upper air passages than a place of higher altitude. Most every case of asthma and consumption improved at once. Being a specialist of throat and lung trouble, I have had only one case of asthma among the natives during the last two years. Pulmonary troubles are rare. The air is pure, clean, and seems to have a peculiar effect upon hypertrophied membranes of the throat and nares, rendering breathing at once sweet and free.

The undersigned physicians willingly indorse the climate as the best in lung troubles:

J. B. F. DICE, J. R. WILKINSON,
D. A. NEILSON, H. E. HALE,
D. E. SHIELDS, A. LEGG.
W. STUART LEECH,

RESORTS FOR CONSUMPTIVES.

I AM pleased to see that you are going to give some attention to resorts for consumptives. It is doubtless true, as Dr. Marcy stated in his address before the American Medical Association, that the mortality from this disease is enormous, amounting to over one hundred thousand annually.

It would seem that the profession should give this subject more attention and endeavor to rescue some of these cases of phthisis pulmonalis.

In a study of the effects of climate it seems that the mortality grows less as we go West, until in New Mexico and Ari-

zona, or the Southern Rocky Mountain regions, that the per cent. is only 3, while in New England it is 25 per cent.

If climate can cure this disease, it seems to me that systematic effort should be made to transfer consumptives *nolens volens* to these salubrious sections.

The American Health Resort Association has taken this matter in hand, and in co-operation with the profession generally, expect to do much in stamping out this disease.

Much has yet to be learned about the climates of various sections of the United States, and the class of cases adapted to each, so as to enable the profession to make the best selection of climate for these cases.

As a general proposition, the fibrous form seems most benefited by a high altitude, while the catarrhal recover in a lower altitude, but there are diversions of these.

This whole subject is a most interesting one, and I believe the profession are becoming interested, at least if we can judge by the large numbers who are becoming members of this Association. I hope you will get matter enough to fill several special numbers.

T. C. DUNCAN, M.D.

CHICAGO, ILL.

LAMPASAS, TEXAS.

THINKING I may be of some advantage to you, and to that very numerous class of persons "consumptives," in the special number of your journal, on "Health Resorts," I will write you a brief article on the subject. Two years ago I had an attack of la grippe, which left me with a bad cough, which developed into "phthisis pulmonalis," with hemorrhage from throat and upper lobes of lungs, and afterwards with exhaustive night sweats. In September last, having improved so that I could travel by private conveyance, camp out, fish and hunt, I made the trip with several companions from Lampasas to San Antonio, Texas (camping every night and improving daily). Our route lay through Llano, Fredericksburgh and Baudera, all in a high, rolling, prairie country free from malaria. I think Fredericksburgh, Texas, is a very desirable place for an invalid with consumption, because it is a high, dry, hilly country, with a sandy soil, wide gravelly streets, and the cleverest German people I have ever met. The population is about one thousand persons. They are all good livers; malt their own lager beer; bake their own white cream loaf bread, and also rye bread, made from their own grain, and ground at their own mills. They also raise grapes, and make most excellent wine; milk, and butter and eggs can be had in any quantity and cheap; also good beef, mutton and veal, as well as poultry at their markets; board as good as any where in Texas can be had there, and at reasonable rates. The Germans of this little town are sociable and fond of pleasure, they meet every night at their social hall and garden where they sing, play cards, and drink their beer. I would recommend to the consumptive a trial of this "old Dutch town." Go by rail, "Aransas Pass Railroad from San Antonio to Comfort," and private conveyance twenty-five miles to Fredericksburgh. Another place I wish to recommend to the invalid is the city of Saltillo, Mexico, four hundred and seventy-five miles southwest of San Antonio, Texas, and three hundred and twenty five southwest of Laredo, Texas; go by I. and G. N. Railroad from San Antonio to Laredo, and thence by Mexican National Railroad via Monterey to Saltillo; population, twenty-five thousand; altitude, five thousand seven hundred feet above the sea. This city, I consider, has the most salubrious climate in North America, and is easy of access, as sleepers are on all the railroads. I spent a week last December in the city. My thermometer registered 55°, day and night, for eight days, and I would have liked to have spent the winter in that pretty little city, but I found it impossible to get a comfortable room and bedding, or any suitable food for an invalid, or a cook who could prepare food. I could not find a stove or fire place in any room offered for rent (which is very essential to the invalid). I also found very few Americans, or persons who could speak English. With a good hotel or cottage kept by an American, with suitable food and fire-places or stoves, I am satisfied hundreds of American women and men would flock to that delightful climate to spend the winters. I was told by persons who had been there ten years, that there were not twelve days of the winter months when the sun was obscured by clouds,

and the thermometer did not get lower than 50°, nor higher than 80° the year round.

Address Dr. Bibb, or Dr. I. D. Carothers, Saltillo, Mexico, for further information. A. H. GRAHAM, M. D.

HEALTH RESORTS FOR CONSUMPTION.

SOME one has kindly sent me a marked copy of your issue of August 13.

As special commissioner of the American Health Resort Association, which was organized one year ago by a few of the medical profession in the West, regardless of creeds or pathies, I submit the following, viz.: "The object of this Association is to ascertain reliable facts about climates, health resorts, and mineral waters, for the guidance of the medical profession in America and Europe."—(*Extract from By-Laws.*)

The work from the start has been phenomenal. Physicians from all sections of the country, and from all schools of medical science, have been and are endorsing the good work. The need of the work was made clear by the facts brought out by Koch, and the disappointment of the profession of America in his "Treatment of Tuberculosis." I had the presumption, during the heat of the excitement of the "Koch treatment," to throw a small paper wad of criticism upon what seemed to me a "fad," which was published in the *Inter Ocean*. Some correspondence with a few progressive physicians, soon led up to the present organization. I was an invalid at the time, from a severe injury, caused by a fall on a defective sidewalk. This, in brief, explains the birth of our healthy, one year-old organization. If the profession keeps on in the same steady march, endorsing it with one dollar each (for one dollar is the membership fee), there will be funds sufficient to keep it growing until our knowledge is greater than now, about how to prescribe climate to the best advantage for each patient. Heretofore, we have not done this; but catarrhal, fibrous, and all forms of the dread disease have been sent to the same places, because the majority of us were too ignorant in this important branch of curing this disease, and too negligent about informing ourselves, as we often are, about prescribing drugs in other diseases as well as this. And, until we all know the true formulæ of all our mineral waters (as to the reliability of which today there are honest doubts existing in the minds of some of the best of the profession), hereafter we purpose to invite all proprietors of mineral springs, and all venders of mineral waters, to submit their wares to our chemists for a reliable analysis, accompanying their requests with the usual fee. We already have two first-class professors of chemistry in our Association, and hope others will soon join us.

The practical work of our organization is worthy of mention. In our researches we found the profession and business people of New Mexico and the Southwest very responsive and earnest in their desire to have their climate thoroughly tested. To prove their good-will, committees were formed to work in unison with our Association, they to secure comfortable homes in private families, and welcome those we recommended to their hospitality, and try to secure places where the expense should not exceed one dollar per day. There were quite a large number that went with our blessings and introductions to those Western philanthropists (our President tells me about one thousand went). So far as we were able to designate as to the place where each case should go, very flattering results have been obtained. In the future, we can do much better, we trust, for we were new beginners, and have been learning, and expect to keep on in our educational work.

In my part of this great work I soon learned that not less than one half of the victims of this terrible disease were too poor to think of making the only change that promised restoration to health. This led me to see if some method could be devised to overcome this obstacle. I had not long to wait, for as soon as I informed our President of my design, and mapped out a plan which he endorsed and encouraged, the work was begun at once toward an organization. I did the usual amount of running to this and that one, until we were able, upon the 16th day of last April, to make a beginning. In the parlors of the Tremont House, Boston, Mass., there were gathered a reverend gentleman, three physicians, two real estate men, an editor, an attorney and two ladies. Then and there, at high noon, was born an organization to which was given the name of "The American Invalid Aid Society." This child has had the usual experiences

of any young infant, but is now in a healthy condition, notwithstanding some of its god-parents have been dozing during some of these hot days at summer resorts.

The object and aim of this society is to lend help to worthy invalids of consumptive tendencies (any of your readers desiring to know more particulars about this society, can secure the same by letting their wants be known with a one cent postage stamp up to 100 or more dollars to help the good work along). The secular press everywhere is "lending a hand." The *Boston Transcript* has published several long articles favoring the work; not less than one hundred newspapers from Maine to Minneapolis have given valuable space and kindly articles for the great work, and will doubtless publish much more. The medical journals are doing their share of type setting to promulgate the good cause. The religious press will soon throw off its conservatism and outdo all others in carrying the gospel of "health resorts to consumptives," whom the patent medicines so widely advertised have failed to cure. This is not intended for sarcasm, but sober careful thought; too many people catch at the straws of hope they read in blazing advertisements in all classes of newspapers. Editors publish their papers for the profit to be gained; they publish columns upon columns of the most profitable reading for those who wish to read it. More than half of my little education has been gleaned from reading papers and journals. All the cream of our sciences first send their gleams of intelligence streaming to those of us who are ever "seeking more light," through the great public press.

The officers of the Invalid Aid Society are: Rev. Charles R. Bliss, President; Mr. Geo. H. Richter, First Vice-President and Business Manager; Mr. Hezekiah Butterworth Second Vice-President; Mr. A. B. Upham, Treasurer, and W. P. Roberts, M. D., Secretary. All donations should be sent to the Treasurer, Mr. A. B. Upham, Youths' Companion building, corner Columbus avenue and Berkly street, Boston, Mass.

W. P. ROBERTS, M. D.

LAS CRUCES, DONA ANA COUNTY, NEW MEXICO.

A WORD about climatology. I contributed last year an article to the *American Medical Journal*, in which I described the vicinity of Las Cruces, and especially the San Augustine plains, as away above all the other country, and the best locality for a sanitarium for consumptives. I will repeat here, in brief, what I said then.

These magnificent plains, of several hundreds of thousands of acres, are only camping ground at present, distant twenty miles from Las Cruces, the nearest railroad station. I hope that in the near future some capitalist will see the advantages of placing a sanitarium there, and a town will be spread out.

Las Cruces, the center of the fruit growing Mesilla Valley, is a very good winter resort, but the hotel accommodations are very poor. In the vicinity of Las Cruces there are a great many farms, where board can be had very reasonable. In the shooting season there is an immense quantity of game of all sorts, and large catfish are in the Rio Grande river.

Families coming here to this valley, with a small capital of from $4,000 up, can buy some very good land, under irrigation, at reasonable prices, and have a part of it in vineyard, part in orchard, and part in alfalfa for their horses. The alfalfa gives at least $25 net profit per acre per annum; early peaches sold this year for 10 cents a pound, netting, at a low estimate, $200 profit per acre. A vineyard of good quality of grapes will pay from $100 to $150 per acre per annum, and never fail; but, in each case (except the alfalfa, which will pay the second year), the farmers will have to wait four years before their trees will produce fully. A sample orchard, four years old, can be seen at present in full production. While waiting for their trees to grow, the people can plant sweet potatoes, Irish potatoes, tomatoes, melons, beans, etc., which will do for the living until the trees are old enough to bear. The first sweet potatoes on the market here bring 5 cents per pound; the first watermelons 50 cents each; early tomatoes 5 cents per pound; beans 6 to 10 cents per pound, etc.

In March and April we have a good deal of local wind, sometimes accompanied with sand, which is very disagreeable, but it is only occasional, and for those two months only.

The water in the valley is alkaline, but that in the mountains skirting the San Augustine plains is perfectly pure.

Persons coming to the valley must be careful in the use of water at the start. We have also a little malaria in the valley, but three or four doses of quinine per month, in February, and March and November, will be sufficient to expel it, and sometimes the taking of a large cup of black coffee, with the juice of a lemon, for five or six days, will also accomplish the object, and especially where there is no regular intermittence.

People coming here for their health must know they are coming to the far West, and to no place where theaters and amusements of like character are plentiful; and they must not be lonesome, if so, they had better stay at home, or bring their families with them. In my opinion the patients must do something, have some kind of corporal occupation; in this case they will all do well, without an exception. There are plenty of specimens here to corroborate my assertions.

The best locality in the United States for the "grape cure" will be found in the Mesilla Valley, in the vicinity of Las Cruces, where the grapes attain their greatest maturity.

Those who may desire further information may obtain the same by addressing the Secretary of the Commercial Club, Las Cruces, New Mexico.

DR. A. PÉTIN.

ENCLOSED find check for one year's subscription to THE TIMES AND REGISTER.

I wish to congratulate you on the merits of this most excellent journal. The feature of special numbers was indeed a happy inspiration on the part of the originator. I await with much interest the special numbers on cholera and typhoid fever.

M. L. CHADMAN, M.D.

LANCASTER, PA.

PILOCARPINE IN ERYSIPELAS.

I NOTICE in your issue of September 3, of THE TIMES AND REGISTER, under head of "News and Miscellany," reference to Dr. Hall's experience with pilocarpine in erysipelas.

I have used riat. pilocarpine in erysipelas for the past six years with uniformly good results. I gave it in single doses of sufficient quantity to produce free diaphoresis, repeating the dose the following day if necessary, but I seldom found it necessary. J. M. BEYSEL, M.D.

WEST POINT, ILLINOIS.

RETROFLEXION.

I TAKE the liberty of writing to you to ask your advice concerning a case I have that has baffled all treatment that I have been able to give her. The patient is my wife, and she is sterile, caused from a retroflexed uterus. She is in general good health and her affliction is improved. The os uteri is small and constricted. I can get a No. 10 bougie up to the internal os, but no further. She is opposed to operative measures, and I write asking your advice on the subject. I have given her several tonics, yerba santa, celerina, viburnum compound, dioviburnia, tincture of chloride of iron, and nux vomica; in fact, have gone through the category of popular remedies. J. F. W.

[I would drain the uterine tissues well by means of glycerine tampons, a fresh one to be introduced every six hours, for one week. Then dilate the internal os most gently, by graduated sounds, and treat the catarrh there by aristol, one part to fifteen of petrolatum, introduced by an ointment syringe. It is probable that this will remove the sterility, and pregnancy will, I trust, cure the flexion. I have treated such cases for years by pessaries, and the result is only satisfactory through the expenditure of time, trouble, and patience on the part of doctor and patient.

W. F. W.]

GUN-SHOT WOUND—MEDICO-LEGAL ADVICE.

THREE weeks ago I was called to attend a young man who had been fatally shot. Of course, I am now on the high road to the witness-stand, and would like a little assistance from the readers of THE TIMES AND REGISTER on the following points:

1. What points of evidence have we between long and short range except powder-marks and burns?

2. Has finding pieces of clothing in the wound any bearing on the question of long or short range, and how?

3. Is there any record of a perforated bowel being closed by blood-clot, which clot underwent organization, perforation healed, and patient recovered?

4. How long would it take the clot to organize, surroundings being favorable?

An early reply will greatly oblige a brother M.D. in his first case of this kind.

D. J. Tillotson, M.D.
22 East Market Street, Corning, N. Y.

The Medical Digest.

Southern California.—It must be borne in mind that, as Cullen most aptly remarks, "the air of any place is better for the patient than that in which he grew ill;" and we must also remember that there can be no hard and fast rule for the selection of a climate; but this must be regulated by individual peculiarities. Some will improve or thrive in a warm or hot climate; others in a cool or cold environment; some at sea-level, others at an altitude in rarefied air; but all will probably do best in a dry locality, with a super abundance of sunshine. Variability and equability must be considered in individual cases. The former is of less importance than the latter, which in many cases is to be considered as one of the most important factors.

In Southern California one may find all of these conditions, from the warm equable climate of the coast, where, as we have already shown, the variation of temperature is of the slightest degree possible, and the rainfall is at a minimum, up to an altitude of 12,000 feet, in the San Bernardino Mountains, with the meteorological conditions which we all know are found at this height, down to a basin in the eastern part of San Diego county, 360 feet below the level of the sea.

In California of the South, owing to the peculiar topography and the enormous size of the State, we are able to surround our patient with many and varied climatic conditions within a few hours. At the coast he may be subject to the beneficial effects of sea air, which is so marked in the catarrhal processes of phthisis, or of subacute or chronic bronchitis. Furthermore, an ocean climate assures him of great purity of atmosphere with an abundance of ozone, conditions which are most soothing to an overwrought, nervous system. If he can obtain these conditions without the soil dampness so prevalent on the Atlantic coast, and so conspicuous by its absence on the lower coast of Alta California, he will in many cases be situated in an environment which will retard the progress of his disease primarily by its effect upon his general condition, and allow him to derive all the benefit referred to. Experience has taught me that non-tubercular cases will do best under this plan of life, but that the other forms of pulmonary disease do best between sea-level and 700 or 800 feet elevation.

—W. A. Edwards, in *The Climatologist.*

Dr. Shakspeare on the Cholera.—The course of the present epidemic of cholera shows that the disease has been marching westward with unprecedented rapidity, and that its virulence is more marked than most other cases of cholera epidemics. The present epidemic started in Eastern India in May of this year, and, after ravaging Northwestern India, Afghanistan, Northern Persia and Russia, has, in the space of less than four months, become epidemic at various ports along the North Sea and the English Channel. In former epidemics of cholera following this route, such rapidity of progress has never before been known. It has universally required from one to two years to cover this enormous expanse of territory—an indication of the extreme virulence of this epidemic. The latest news from Europe brings the information that almost every port in the North of Europe with which the Atlantic coast of America is in frequent and rapid communication, is either infected with cholera in epidemic form or has experienced outbreaks of individual attacks. Thus we hear of the disease widely epidemic in Hamburg, Antwerp and Havre, and of its introduction into Gravesend, London, Dover, Hull and Glasgow.

The Transmission of Cholera.—The disease has been brought into England by immigrants from the infected ports of Europe, on their way to take ship by a more indirect course for America, so that the truth is that we should look, from the present time on, until cooler weather sets in, upon every ship that sails from any of these ports, including the English, as possible carriers of the dread infection, and should, in every single case, handle these ship-loads with the greatest caution. In my opinion, with such a constant stream of immigration from infected or suspected ports, it will be absolutely impossible, or, to quote the words of the Surgeon-General of the Marine Hospital Service, "nearly

a miracle," to prevent the disease being introduced through some of our ports or those of Canada. It is, however, my belief, based upon experience and wide study of cholera epidemics, that if the proper means are promptly and rigidly enforced by the public health authorities along the Atlantic seaboard, this "miracle" can be accomplished; but its accomplishment requires intelligent and earnest co-operation, not only of every health official at these ports, but also a ready and willing acquiescence of ships' officers and trans-Atlantic steamship companies.

Where Quarantine Has Failed.—It is true that many times in the struggle against the advance of this disease quarantine has failed. But this has been invariably due either to want of proper facilities for handling ships' crews or passengers, their baggage and personal effects. The essential means of preventing the introduction of cholera into any port may be considered under three heads:

1. And most important, efficient means of thorough and rapid disinfection of all personal effects of travelers and crew, especially wearing apparel and bedding. In this category should be mentioned, also, the proper means of disinfecting the quarters of the ship inhabited by crew and passengers.

2. Ample facilities for retaining under close observation, for at least five days, every ship-load as it arrives, whether the ship's officers present a clean bill of health or not, and whether or not certificates of disinfection at foreign ports are presented. Experience has time and again shown that reports by ships' officers of the sanitary condition during the voyage are not to be trusted.

3. The proper facilities for the housing, isolation and treatment of those actually afflicted.

Philadelphia's Quarantiue Facilities.—As I have previously pointed out in the *Public Ledger*, the quarantine station of Philadelphia is, in some of the most essential particulars, antiquated, obsolete and lacking in the extreme. I am glad to say, however, that, notwithstanding the difficulties due to the absence of public funds available, which the Board of Health have been confronted with in the present emergency, they are working energetically and intelligently to temporarily meet these deficiencies, as far as lies in their power. Temporary means of disinfection of baggage have been provided, and, I understand, are now in working order. There are no means, however, of properly disinfecting the quarters on shipboard occupied by passengers and crew. I am informed, also, that, by action of the Board of Health, taken to-day, provision will be made for handling immigrants landed at the Lazaretto, in improvised encampments, for observation. The one thing still lacking in the provisions adopted by the Board of Health, temporarily, for the struggle this fall against the threatened invasion of this port, is one of the essential things for our safe protection. I refer to the fact that, as yet, they have made no attempt, as a standing rule in every individual case, whether cholera is actually on board or not, to stop these immigrants at the Lazaretto, and keep them under strict observation during the incubation period of cholera, which does not last more than five days.

Insidious Nature of the Disease.—This epidemic disease has shown itself to be among the most insidious in the selection of modes of invasion. If it were endowed with intelligence it could not more certainly perceive and assail the weakest points of defence than it universally does. Here is the one most vulnerable point still left unprotected by our Board of Health, and if the "miracle," which I have already alluded to, is to be accomplished, so far as Philadelphia is concerned, this defence must be promptly and rigidly made. No doubt just in this one matter the Board of Health may have to contend with the earnest opposition of the influence of our trans-Atlantic steamship companies, although hitherto the Board has received the ready co-operation of the agents of these companies, for the detention of each and every ship-load of immigrants at the quarantine station means the expenditure, on the part of the steamship companies, of considerable sums of money for the maintenance of the immigrants during these periods of five days' detention—an expenditure which will seriously lessen, no doubt, or perhaps actually wipe out, the profits of the immigration traffic. Yet in the interests of the public health, not only of the citizens of Philadelphia, but also of those who are directly interested in the ultimate movements of these immigrants, the vast

majority of whom come to this port in transit only to various inland points, I cannot too urgently advise that this essential measure of stopping every immigrant for five days' observation at the quarantine during the rest of the season be at once adopted and rigidly enforced. The safest course to be adopted by the whole country, in view of the weakness of our quarantine defences along the whole Atlantic coast, with the exception, possibly, of those of New York, would be the complete stoppage until cold weather of all immigration from Europe.

How Cholera may be Rendered Harmless.—Asiatic cholera is, for any intelligent person, one of the most harmless diseases, if only the proper means are taken to guard oneself against its attacks. It is true that it assails with the greatest virulence, and destroys with frightful rapidity, those who neglect in times of danger to properly guard themselves. It is a disease the infectious principle of which attacks the human system only by way of the digestive apparatus. The infectious principle, or, in other words, the cholera microbe, enters through the stomach into the intestinal canal, and there develops its fatal poison, which is absorbed into the blood and preys upon the nervous system and vital organs. The disease is essentially characterized by violent purgings, vomiting and cramps, with coldness and duskiness of the skin. The discharges from the bowels and from the stomach contain enormous numbers of these virulent microbes. If these discharges soil the personal effects, bedding, clothing, etc., and these soiled materials are handled or washed without disinfection, the person so handling is exceedingly liable to an attack of the disease. If the undisinfected discharges of the bowels are allowed in any way to contaminate the drinking water, the milk or the food consumed, the person using such contaminated food and drink is exceedingly liable to develop an attack of cholera.

Close Examination of Slight Attacks.—It has been found that, although many attacks of cholera are exceedingly virulent, yet it is well known, on the other hand, that attacks may be so slight as to pass unnoticed by inspecting officers, and not even be recognized by the patients themselves, except as an ordinary case of diarrhœa. Yet it is just these light attacks which are liable to evade the inspection of quarantine officers who perform their duty on board ship, subjecting each individual to an examination of not more than a few seconds, as he is rapidly mustered for inspection. It is for this reason that I urgently insist upon the necessity of landing all immigrants for the purpose of prolonged, close observation, for these light attacks are every whit as capable of disseminating the epidemic as are the most virulent.

—*Ledger.*

Strychnine in Cholera Cases.—Dr. Sutcliffe, of Tundla, says he means to try hypodermic injections of strychnine in the next case of cholera which comes under his treatment.

I have used such injections in hundreds of cases of cholera within the last four months and with very satisfactory results. I began the practice in the latter days of February, and have since followed it in every case where collapse seemed approaching or had set in.

I give 5 minims of liquor strychnine in an equal quantity of water. As my cases were almost all seen in their own houses, and there were so many to be visited, it was, as a rule, only possible to give two injections in the day to any one case, that is, when on my morning and evening rounds. I have given five injections in the twenty-four hours, and two more during the following twelve hours in the case of a prisoner where the effects could be watched, and have no doubt the man owed his recovery to this remedy.

When the urinary secretion has not been re-established within twelve hours or so of the cessation of the other symptoms, I have used hypodermic injections of pilocarpine with, in many cases, marked success, urine being passed within less than five minutes after the use of the syringe. —T. French-Mullen, M.D., in *Indian Med. Gazette.*

The Origin and Diffusion of Cholera.—Surgeon-General Cornish, of the British service, in a paper on the present epidemic of cholera, describes the spread of the disease, and the similarity to other epidemics.

So far as can be gathered, the epidemic which now threatens the whole of Europe, appeared in March or April of the present year, in the northwestern provinces of India; attacked with great violence the

pilgrims at the great Hurdwar fair, near the source of the Ganges, spread through Cashmere and Afghanistan, reached Persia in May or June, crossed the Caspian Sea, and spread amongst the population of Asiatic Russia, from whence it is making rapid progress in European Russia. The epidemic since April has traveled in a northwesterly direction, and has covered or overflowed many thousands of square miles of territory. The history of the progress of the great epidemic of cholera of 1829–33 should be closely studied by those who wish to understand the significance of the present epidemic. Cholera history is very apt to repeat itself, and the circumstances which happened in 1831 are, therefore, very likely to happen again in 1892 and succeeding years. The route taken by the present epidemic is almost identical with that which invaded Europe in 1831.

It is quite a mistake to suppose that since India is the natural home of cholera the disease is everywhere present there and ready to take an epidemic form. An epidemic of cholera follows the same laws in India as in any other country. It is epidemic only in certain and limited parts, from which an epidemic advances occasionally, with intervening intervals of uncertain duration. Its progress is influenced by season and atmospheric conditions, and after lasting a period of about three years the epidemic dies out. Surgeon General Cornish alludes to Russia's half-civilized acquisitions in Asian soil as a source of difficulty and danger in this direction. As regards land quarantine and sanitary cordons, which European nations are so ready to enforce against their neighbors, these have never been successful in keeping out cholera. In India, with ample military aid at hand, they have been tried again and again unsuccessfully. The only provisions on which any reliance can be placed are sanitation, a good water supply, efficient drainage, surface soil cleanliness, wholesome food and habitations. The invading cholera, if it does not reach England in the present autumn, is, in Surgeon-General Cornish's opinion, likely to do so in 1893.

The reported outbreak at Hamburg and Havre, if true, increase much the danger that the disease may be imported into the United States, especially as large numbers of Russian Jews are constantly coming through the former port to this country. The Marine Hospital Service is now taking active measures to strengthen the quarantine of our sea board.

—*Boston M. & S. Journal.*

News and Miscellany.

THE digestibility of various kinds of cheese has been recently tested by a German chemist, who placed the samples in fresh gastric juice. Cheshire and Roquefort cheese took four hours to digest; Gorgonzola and Neufchatel, eight hours; and Brie and Swiss cheese, ten hours.

THE TENTH ANNUAL OPENING OF THE PHILADEPHIA POLYCLINIC.—The Philadelphia Polyclinic will open its fall and winter term on Monday, September 26, 1892, and from present indications, with a large class of students. Dr. John B. Roberts will deliver, as an introduction to the course, an address on "Injuries of the Hip Joint," at 8 o'clock on the evening of the same day, in the hall of the college, 1818 Lombard street, to which members of the profession are cordially invited.

TO OUR PATRONS:—From this date, the medical publishing business, established by John M. Scudder, will be conducted under the firm name of John M. Scudder & Sons.

The *Eclectic Medical Journal*, established in 1833, will still be edited by John M. Scudder, M.D. A complete line of eclectic medical books—our specialty—always on hand. All communications in reference to the *Eclectic Medical Journal*, either subscriptions or advertisements, and all orders for books, should be addressed, and remittances made payable, to

JOHN M. SCUDDER & SONS,
228 W. Court street,
Cincinnati, Ohio.

A FALSE statement is going the rounds of the press to the effect that visitors will not be able to get any drinking water at the World's Fair without paying for it. There will be abundance of excellent water free to all who want it. Those who wish to drink mineral spring water, piped to the Exposition grounds from Waukesha, Wis., a hundred miles distant, will have to pay one cent a glass for it. The free water will be that of Lake Michigan, brought by tunnel from a point four

miles from shore, and much better than the inhabitants of most large cities are supplied with.

RECENT OBSERVATIONS ON SULFONAL.—Sulfonal has been doing very satisfactory work in general practice, largely supplying the place of narcotic drugs in conditions in which the use of the latter is unadvisable. The usefulness of this remedy has called forth many expressions of opinion from all parts of the country. Among these we cite the following from Dr. J. H. Mackay, printed in the *Medical and Surgical Record* of May, 1892:

"Sulfonal has been introduced into my medicine case to stay. Not often will it be needed, but in a few cases, no other remedy can fill its place. My first experience with the remedy was in a case of grip. My patient was nervous, restless, had a hacking cough and headache, and had not slept for upwards of thirty-six hours. At nine o'clock in the evening, as there was no indication of sleep and he was worn out, I gave 25 grains in half a cup of hot water. At eleven he fell into a dreamless, physiological sleep, which continued without interruption for eleven hours. He awoke refreshed, with mind clear, pulse normal, and no headache or subsequent drowsiness, ate some breakfast, spent a comfortable day, and slept well on the following night without repeating the dose of sulfonal. Other remedies, of course, were given for cough and fever.

"Another case was one of alcoho'ic insomnia. Patient had been on an extended spree—one of many such—and was verging on delirium. For several days and nights sleep was impossible. The stomach was irritable and the pulse rapid. He had been there before, and had learned the use of antidotes and hypnotics, but they only increased the irritability of the stomach and the excitability of the heart and brain. I gave 20 grains of sulfonal, and, in two hours afterwards, the vomiting ceased, the pulse slackened, and the patient slept for several hours. The vomiting did not return. Before using sulfonal, I had exhausted my resources to quiet him."

Among the newer uses which have been made of sulfonal in therapeutics, we have observed the report of Dr. Julius Althaus (*Am. Jour. Med. Soi.*), in which the author successfully treated post-grippal pyschoses, where insomnia was present, by the use of prolonged baths and sulfonal.

Dr. Hammond is reported as making successful use of this remedy in the insomnias following the opium habit; and several observers attest its value in alcoholic delirium. Sulfonal has also given very satisfactory results in inveterate and incurable cases of epilepsy where there is super-excitability of the brain, and where the attacks are very numerous. The alleviation was very marked in all cases, although the doses were smaller than the average dose for insomnia, being from 10 to 36 grains, administered in warm tea broth at bed time, or given in fractional doses during the day.

MONTHLY BULLETIN, NEW YORK STATE BOARD OF HEALTH.—In July, the number of deaths is uniformly greater than in any other month of the year, the increase being due to the large fatality from diarrhœal diseases. The average daily death-rate has risen this month from 302 in June, the lowest of the year, to 437, the highest, exceeding that of January, when during the height of the grippe epidemic it was 434, and the highest of any month previously recorded, excepting that of April, 1891, when the earlier grippe epidemic raised it to 466 per diem. There were 2,000 more deaths than in July, 1891, and nearly 3,000 more than the average for July for seven years past. The deaths from diarrhœal diseases rose from 676 in June to 3,629, a larger number than any previously reported for one month. There is an increase in the mortality from typhoid fever and whooping-cough, but that from scarlet fever and measles is materially diminished. There is little change in diphtheria. There is a marked increase in the mortality, as is customary in July, from diseases of the digestive and nervous systems. An unusually large number of deaths is reported from accidents and violence; several of these have been from lightning stroke, but most are from drowning and railway accidents. About 52 per cent. of the deaths reported occurred under five years of age. From consumption there were 1,093 deaths, which is about the same as in June and in July, 1891. In the six largest cities, whose aggregate population is 3,374,500, there were 9,351 deaths, or an annual death rate of 32.62 per 1,000. Nearly one-third of these, or 2,838 deaths, were from diarrhœal diseases. In the rest of the State, nearly 3,000,000 population reporting, there were 4,075 deaths, giving a death rate of 16.50, and 755 deaths from diarrhœal disease, or about one-sixth of the total mortality. Of 1,670 deaths in the rural districts, but 160 were from diarrhœal diseases.

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PAGE

ORIGINAL ARTICLES:

TYPHOID FEVER. By E. A. Cobliegh, M.D. - - - 345
CONCERNING TYPHOID FEVER. By W. Thornton Parker, M.D. - - - - - - - - - - - - - - - 348
TYPHOID FEVER. By J. A. DeArmand, M.D. - - 351
TYPHOID FEVER IN NEWBURYPORT, MASS. By E. P. HURD, M.D. - - - - - - - - - - - - - - 352
TYPHOID FEVER IN ST. MARY'S HOSPITAL. By W. J. O'Reilly, M.D. - - - - - - - - - - - - 353
CONCLUSIONS AS TO THE TREATMENT OF TYPHOID FEVER. By Francis L. Haynes, M.D. - - - - - 354

EDITORIAL:

TYPHOID FEVER. *Waugh* - - - - - - - - - - 355

LETTERS TO THE EDITOR:

Sulpho Carbolates in the Typhic Fevers. *Williams* 356
Typhoid Fever. *Cline* - - - - - - - - - - - - 356
Typhoid Fever. *Smith* - - - - - - - - - - - - 356
Typhoid Fever. *Coffman* - - - - - - - - - - - 358
Puerperal Convulsions. *Millard* - - - - - - - - 358
A Morphine Case. *Pace* - - - - - - - - - - - - 359
The Chloride of Silver Dry Battery. *Clevenger* - - 359

BOOK NOTICES:

An American Text-Book of Surgery for Practitioners and Students. *Keen and White* - - - - - - 360
A Practical Treatise on Diseases of the Skin. *Shoemaker* - - - - - - - - - - - - - - - - - - 360
Essentials of Medical Diagnosis for Students of Medicine. *Solis-Cohen and Eshner* - - - - - - 360

PAGE

The Principles and Practice of Bandaging. *Davis* 360
Medical and Dental Register-Directory and Intelligencer for Pennsylvania, New Jersey and Delaware. *Keil* - - - - - - - - - - - - - - - - 360
Catalogue of Surgical Paraphernalia. *Yarnall & Co.* - 361
Proceedings in the Case of the State of Arkansas Against Dr. Geo. E. Petley - - - - - - - - - - 361
An Epitomized Review of the Principles and Practice of Maritime Sanitation. *Holt* - - - - - - - 361
"Joe Brown," Doctor on Alcoholism, Its Cause and Cure - - - - - - - - - - - - - - - - - - 361
Abstract of the Minutes of the Meeting of the State Board of Health of the State of Illinois, in Chicago 361
Memorial of Dr. P. A. Wilhite - - - - - - - - - - 361
Outlines of Treatment with Dosimetric Granules; from the Standpoint of the General Practitioner. *Waugh* - - - - - - - - - - - - - - - - - - 361
Contribution of Physicians to English and American Literature. *Kenner* - - - - - - - - - - - 361

THE MEDICAL DIGEST:

A New Method of Skin Grafting (*Aievoli*)—Phenacetine-Bayer in Typhoid Fever—Short Paroxysms of High Temperature in Convalescence from Typhoid Fever (*Bouveret*)—The Immunity Conferred by Typhoid Fever (*Potain*)—Royal Academy of Medicine in Ireland (*Med. Press*)—The First Signs of Locomotor Ataxy (*Fournier*)—Treatment of Cholera (*Daremberg*)—Cholera (*Lazarus*)—Note on the Cholera Epidemic of 1873 in Rouen (*Olivier*)—The Search for a Cholera Prophylactic (*Hosp. Gaz.*) - - - - - - - 354, 361–367

NEWS AND MISCELLANY - - - - - - - - - 367
MEDICAL CORPS, U. S. NAVY - - - - - - - - 368
NOTES AND ITEMS - - - - - - - - - - iv, x, xii

Original Articles.

TYPHOID FEVER.

By E. A. COBLEIGH, M.D.,

Professor of Practice, etc., Chattanooga Medical College.

IN response to your request for me to give you some of my views on typhoid fever, I reply that there is very little I could add to the exhaustive literature of this subject which would be of value. Indeed, this, of all medical matters of interest, has certainly received widespread attention at the hands of the best professional thinkers of all lands and every age, since the disease was first recognized as a separate affection. And such would very naturally be the case, because it is an affection which prevails over most of the inhabited portion of our earth, and is attended with a very considerable fatality.

I therefore suppose that others of the writers who will contribute toward the article you have in contemplation will, no doubt, cover practically the main points which I should naturally touch upon if I were to attempt an article on my own responsibility; and, assuming this, I shall merely furnish a few thoughts upon special phases of this subject.

In the first place, then, it seems to me that since I have been a medical observer myself, this disease has shown a general tendency to become less severe and fatal in its type than formerly, notwithstanding its frequent local prevalence in serious form here and there, and wholly aside from any modification of treatment which advances in therapeutics may claim of recent years. Certain I am that the disease in this immediate section is, as a general thing, vastly different from what we were accustomed to see in my early practice. But, in these observations, I am not limited to this section alone, as I have combatted typhoid fever in three states in person, and my information covers a much larger territory even than that, by interchange of ideas with professional friends whose field of activity includes widely separated parts of the Union.

Again, it is my belief that typhoid fever is not nearly so fatal or intractable in the South as it is in the North and West. So much so is this the case, coupled with the

increasing mildness of the affection as observed of recent years, that there has been injected into medical discussions, both here and all over this broad land of ours, hot debates as to the very diagnosis and prevalence of the disease itself. Scarcely a journal can be scanned now-a-days without meeting the question "What is it?" referring to the prevalent fever of the locality of the writer. And Dr. Woodward's unfortunate injection into medical nomenclature during the late war of the term "typho-malarial" certainly but aided this confusion, despite the fact of a subsequent recantation, and the direct disowning of his own technical offspring. So we find this endless dispute regarding the prevailing fever, whether it is malarial, typho-malarial, or typhoid, going on everywhere as an irrepressible conflict, and more or less unavoidable confusion obtaining.

That the disease causing this controversy is sometimes purely malarial with accompanying so-called "typhoid" symptoms, is hardly controvertible—certainly more than likely. That it, in other instances, is true typhoid of a mild variety, is equally probable. That it can be a real mixture of two serious diseases, with recognized lighter mortality rate than either of the two, shows which are supposed to produce it when they exist uncombined in an individual or community is an unsurmountable obstacle to the acceptance of the hybrid theory. That measles implanting itself on a system already infected with scarlet fever, would lessen the tendency to death from the scarlatinous toxæmia is absurd; that variolous inoculation would conduce to brightening the prospects of recovery for a patient suffering with diphtheria by production of a hybrid constitutional taint, is of a like character of argument; and such is exactly the attitude of those who hold tenaciously to the basic typho-malarial theory of a double toxæmia by both those poisons.

But the hybrid term serves an excellent purpose in affording us a sort of dumping-ground for the casting of a host of cases which show irregularity of symptoms, or special mildness, or in which, for any reason, we need to cloak our ignorance of something or everything connected with the particular case thus designated. Indeed, as typho-malarial means something, or nothing definite, according to the person using it, so we, who copy after them, are amenable to no standard of comparison because of this confusion, and the term becomes a favorite, with no fixed significance whatever.

The confusion of symptoms and designation of diseases obtains in this vicinity and city just as elsewhere, every case reported in our various societies provoking an immediate discussion as to whether the diagnosis was correct. In several instances this has happened here regarding cases showing the usual symptoms, where post-mortems were obtained. And in every one of them necropsy has shown the unmistakable lesions distinctive of true typhoid fever. Yet in the face of this fact there have always been found those who stubbornly disputed the typhoid character of the indications, and this, too, when the diseased intestines and other viscera were presented tangibly before them and the society. So it seems difficult to convince obdurate doubters in the face of what, to others, would seem indisputable evidence.

Among this class of cases I may mention an interesting one occurring in my own practice last year. A stout, sturdy rolling-mill employé, with a history of wetting by wading a creek on a hunting expedition, was suddenly seized with an apparently catarrhal fever. Croupous pneumonitis supervened, well marked, but convalescence did not follow, notwithstanding that the lung cleared perfectly. Nervous depression set in, fever continuing but no symptoms pointing toward any specific febrile state. Diarrhœa then occurred and persisted with everything pointing to severe enteritis and even slight enterrhagias but no typhoid symptoms distinctive of that disease. After a struggle of three or four weeks he died, and the remains were shipped to Louisville, Ky., his old home, whither his young wife accompanied them after faithful attendance on him during his illness. A few weeks later I received a letter from a reputable and competent physician of that city, advising me of the decease, with typical typhoid fever, of the bride of less than a year, and asking me if dissipation had played a part in the death of my patient here, no suspicion being entertained of typhoid in his case, and the interrogatories being put to satisfy the curiosity of two sisters of the dead man, who, previous to his marriage, had been given to alcoholic excesses. But

there had been no dissipation on his part after his wedding, and I so informed them. However, the letter opened my eyes to the error of diagnosis which I had undoubtedly been guilty of, and in which several consultants concurred at the time, in this case, as I felt confident after carefully reviewing his symptoms that my patient had suffered from typhoid fever and died therefrom, and the wife had contracted the disease from either the same source as her husband, or from neglect of proper sanitary precautions to prevent its spread during her attendance upon him, for none of us suspected typhoid in his case. She left here in good health and fell ill very shortly after reaching her destination—too soon, indeed, to admit of the hypothesis of contraction of the disease in that city. Of course I give this case with the consciousness of much scientific deficiency regarding some of its points and conclusions, but it is certainly of interest from a clinical standpoint, and my deductions are plausible and as reasonably founded as we can attain short of mathematical certainty by necropsy or laboratory demonstration.

As to treatment I must say that wide experience has led me to discard any set line of therapeusis. I have nothing special to offer on this subject. I have no favorite formulæ or pet remedies. But in my own hands "specific" treatment and straight so-called antiseptic methods of medication have mostly proved useless or worse. The new remedies have only widened my ability to promote the comfort of my patients. I do not think the general mortality through treatment has been appreciably reduced by new methods in this country, so far as my personal observation extends. Old plans of treatment are in my hands just as satisfactory and efficacious as the later innovations. Quinine here, and in my hands, I have convinced myself after abundant and repeated tests, only irritates the disturbed intestinal canal, and does actual harm unless in small doses for tonic purposes solely. I limit this statement to this particular locality, however. And by reason of such experience I have wholly abandoned its use save in cases where there is an initial doubt as to the true character of the case and a suspicion of its malarial causation rather than its typhoid type. And when it fails to prove its actual efficacy at once, I promptly discontinue it in that particular case. Yet some of my medical acquaintances in whose ability I have the utmost confidence, hang their highest hopes on this one remedy in typhoid cases, uniformly resorting to it both for its supposed specific effect and its undoubted antipyretic action where combatting of unduly high temperature becomes desirable. The latter results I find obtainable in other ways with, it certainly seems to me, less unpleasant effects on the alimentary canal.

Many cases falling under my care do as well, or better, on mere placebos than on active treatment. I have carried cases through from incipiency to close on elixir of lactopeptine alone, as a placebo to satisfy the patient and friends that he was receiving proper treatment. Tablets of sugar of milk have subserved the same purpose in my hands more than once. And I must say that the favorite remedy of Professor Bartholow, iodized-phenol, has proven the most satisfactory plan of treatment, aside from special symptomatic indications, in perhaps a larger number of cases than any other single plan, though death has happened under this treatment sometimes, as will be the case with any therapeutic measure.

But for its horrible taste, which happens by eructation even when disguised, as is easily done by administration in capsules, there seems to me to have been suggested no better general treatment of typhoid fever than the old plan so ably advocated by Wood, of Philadelphia, Boling, of Nashville, and many others—turpentine. In this drug we combine mild local stimulation of indolent ulcerative processes with antiseptic action of no mean degree, and its efficacy had been thoroughly demonstrated by clinical experience of widespread extent long before the bacterial origin of typhoid had even been dreamed of, much less proven.

Salol in my hands has proven itself a "barren ideality." And this in spite of a partiality for it on theoretical grounds. Your own favorite treatment I have not yet had opportunity of thorough testing. I refer to sulpho-carbolate of zinc. But I intend doing so as soon and as fast as I find the chance, because your theory of its action is well based and I wish to give it a fair trial. However, past experience of "going off after strange gods" has disappointed me, as a rule, thus far, and I fear like results from your own pet which I am free to confess.

Now a word in conclusion regarding the use—and abuse—of the recent synthetic remedies which have attracted so many different expressions of opinion among writers and teachers in journalistic literature during the last few years. I neither sympathize with that wing of the profession which finds in this class of therapeutical agencies a cure-all for typhoid (or any other) fever, showing specific and indispensable properties in the handling of such affections; nor can I quite agree with the other ultra faction which denounces their use altogether, or stigmatizes it as absolutely and invariably harmful. It seems to me that both these wings err in their enthusiasm by either *expecting* too much, or *demanding* too much. Like all potent remedies which are capable of good results, that same potency of influencing the systemic functions necessarily means harm in unsuitable cases or when unintelligently handled. Personally I neither wed or discard such drugs, but find them markedly useful in cases and equally to be avoided in others. There can be no scientific sweeping judgment enunciated that will cover all cases and the whole class of remedies. They must be given "with brains," as the artist once told his questioner he mixed his colors. Thus used they are most excellent allies at certain stages for the physician's cultivation, not with a view of abbreviating the diseased process perhaps, but for the equally desirable purpose of ministering to the ease of the sufferer. Certainly I have found no reason to find fault with their action as a rule, and I shall not discard them at the behest of those whose creed seems to be embraced in the proposition that if they do not absolutely cure (as they ought to do) they can but be disadvantageous. For purposes of mitigation of symptoms, for conducing to the patient's personal comfort sometimes, as anodynes of mild character, in most cases their *proper* administration, guarded by intelligent supervision and not as "stock" antipyretic prescriptions for routine handling, I believe them markedly useful and to be recommended to the profession. Revolutions are said to never go backward, and it is hardly comprehensible to me that we have added to our armamentarium such desirable drugs to be finally discarded again. Instead, I think we shall find how to judiciously give them and then they will receive proper recognition as adapted to a definite place among our other remedial measures.

CONCERNING TYPHOID FEVER.

By W. THORNTON PARKER, M.D. (MUNICH), M.M., S.S.
BEVERLY, MASS.

IN searching medical literature for knowledge whereby to diagnose and treat, if not to prevent, the spread of that pestilence known as typhoid fever, how seldom we discover in English literature the name of that famous teacher and able doctor, Von Gietl, of the University of Munich. The writings of his students, Liebermeister, Lindwarm, Ziemssen, and others, are more or less well known. It is not ten years since an able physician, in speaking of Von Gietl's conclusions concerning typhoid fever, pronounced them "old-fashioned," as if knowledge had been born only in very recent times. The theories of Von Gietl, although disputed by some men of ability to-day, are, nevertheless, recognized as correct by the majority of medical authors and investigators. He defines typhoid fever as "a specific putrid-intoxication disease, which is composed of a chain of diseased processes, which are dependent upon one another, but which do not retain a regularity either in number or in succession. Its local effect is a catarrh of the alimentary canal; the farther and peculiar result, a swelling of the glandular apparatus, as well of the mesentery as the mucous membrane of the intestines, exfoliation and ulceration generally follow, the final effects being mortification in all degrees."[1]

For those who have conducted many post-mortems of patients who have perished from this dreadful fever, how real and perfect is the picture thus presented! But when we seek the causes of this poison, which so often seems to destroy life by a mighty wave of disease, it is then we are forced to admit the difficulty of the task before us.

At the present time, when microbes of all kinds, shapes and sizes are supposed

[1] "Conclusions Concerning the Causes of Typhoid Fever (Entereschen Typhus) in Munich," by Prof. Franz X. von Gietl, Dean of the Medical Department of the Royal University of Bavaria; translated by W. Thornton Parker, M.D., M.M., S.S.

to be the cause of all, or almost all, the ills that flesh is heir to, we will find it difficult to demonstrate that typhoid fever can originate by any other agency than the typhus bacillus. In a recent article in the New York *Medical Record*, December 7, 1889, contributed by the writer concerning "One of the Causes of Typhoid Fever," I have endeavored to prove that drinking water is by no means the only vehicle by which the system may become infected, and that the atmosphere, quite as readily as food, may carry the infection so rapidly and effectually that only a short period of incubation is required in some cases, before a fever of such intensity is developed that the fatal stroke cannot be resisted. In hospitals especially we find cases so profoundly under the influence of the poison that speedy death is a foregone conclusion; just as we may usually reckon upon a prolonged and tedious convalescence even in so-called "mild cases."

Our own experience must have afforded cases where the milk as well as the water-supply was practically beyond suspicion, and yet severe typhoid fever has run its course. Only recently the daily papers contained the account of two boys who sought refuge close to the mouth of a sewer during a rain-storm. They remained inhaling the deadly sewer odor for an hour or more, and were very soon suffering from severe typhoid fever; and yet we find men of ability declaring with a wise sneer that "it takes more than a bad smell to create typhoid fever!" In the great wards of the general hospital at Munich, every patient, upon admittance, was asked by Von Gietl if his or her room was next to the room used as a "privy." Invariably came the answer, "Yes." Whether the cause of the outbreak on board the training-ship New Hampshire, at Newport, R. I., was owing to impure water—which was certainly not proved—the fact that tons of excrement remained about the bows of that vessel and under her open ports, scarcely covered by water, was certainly enough to prove the source of the infection to most men. The "bacillus" may have arisen from the waves, and continued its course through the damp and heavy atmosphere, getting in its deadly work quite as accurately as if it had floated in water all the way to the intestinal glands!

Without attempting any further explanation as to the causes, we may safely assert that thorough hygiene of ship or dwelling is the best preventive, when employed in connection with faithful personal cleanliness. The treatment of the typhoidal condition is, perhaps, less difficult of solution; at least, agreement in this direction, where only too often medical men differ in other diseases, is more commonly observed.

Hygiene of person and surroundings and faithful, intelligent nursing must, of course, attract our attention first. The pyrexia is better treated by the Munich system of bathing than by any antipyretics, in the shape of pill or powder, which has yet come to our notice.

In hospital and often in private practice we are able to place the patient in the bath-tub directly by his bed. It is not advisable to carry him any distance, certainly not into another room. Lifting the body directly from the bed into the bath-tub, and leaving it immersed in the water until the temperature has shown some decided sign of decrease, is common practice with many excellent physicians. Theories differ as to the degree of the temperature of the water which should be employed. I am inclined to think that 70° F., or even as low as 60, is safe treatment, but I am opposed to anything colder than this, and certainly not to the use of ice to lower the temperature of the water. I do not think that the shock is dangerous under ordinary circumstances, although many reduce the temperature gradually from 80° F. I believe that the treatment is best exhibited in the afternoon or evening, anticipating the usual rise in temperature. Where from any reason the bath-tub is not convenient, thorough cold sponging from head to foot is next to be employed. In German hospitals, whether in medical or surgical wards, whenever any significant rise of temperature occurs, the ice cap is always used. Now to use the ice cap seems to be a very simple direction, but how few really use it properly. In the first place the ice-caps found in our American shops are clumsy, heavy affairs, unsuitable for the requirements of antipyretic treatment. The ice-cap should be of pure gum, light and soft, and readily emptied. Ice in small quantities and always mixed with more or less water, as the nature of the disease requires, is what is needed. The cap should not be placed on the head, but suspended by a stout

cord in such a manner that it will always lightly touch the scalp, allowing the patient to turn from right to left without inconvenience. This turning of the patient always received careful attention in Munich. For the first two or three hours, we will say, the patient is upon the right side, for the same length of time on the back, then on the left side, then again on the back, and then on the right again, and so on day and night. This is done, of course, to prevent stasis and diminish the chances of pneumonia.

Decubitus in disease does not receive the attention it deserves from physicians, and this is especially true in the puerperal state. How seldom we find any precaution exerted to prevent the collection and absorption of septic material after delivery. I think that the custom of our Indian women in rising so soon after delivery is oftentimes much safer than that of so many of our Americans, who remain for ten days or two weeks mostly upon their back.

With regard to what is called "treatment," for with many laymen, as well as many medical men, "treatment" is apt to mean dosing, the less of it the better. Those who still cling to sulphate of quinine and Dover's powder will find no lesser authority than that of Sir James Clark favorably impressed with the value of these "old fashioned" drugs. There are successful practitioners to-day who believe in the drugs their fathers used to cure diseases. Quinine, in pill or capsule, is, I might say, our sheet anchor for medicine in this disease, but it must be the best the market affords, and not obtained from irresponsible sources. Dover's powder will be found useful, especially in the first and second weeks, and the care of the alimentary canal must be of the greatest importance. For external, use the spts. of turpentine, either on dry flannel or sprinkled upon those which have been wrung out in hot water. Olive oil on soft cotton cloth is very useful.

It is necessary to inquire into the bed clothing, which should be changed from time to time. The patient should wear a flannel undervest, and a long comfortable night dress, and not be weighed down with heavy quilts, or so-called "comforters." The hot water bag at the feet is often needed, even when the ice-cap is placed upon the head. Whatever the theories may be as to treatment, it must be conceded that nutrition is of vital importance. Milk, beef tea, and a reasonable supply of water. Whiskey and brandy, when stimulation is needed, are, in my opinion, undesirable, if not positively injurious. The best red wine obtainable in half ounce, or larger, doses is the best stimulant in typhoid fever. I know of nothing which is more valuable as a nutrient in typhoid or other wasting diseases than that admirable preparation made by the Arlington Chemical Company, beef peptonoids. In this preparation, from personal experience, I have learned to place implicit confidence, and recommend it constantly as opportunities arise. It is pleasant to the taste when almost all else is disagreeable, easily assimilated, and rapidly recuperative, and deserves the good opinion it has already won.

As convalescence begins liquid or semi-solid diet is indicated. Milk toast, with dropped eggs, soft boiled eggs, etc., but no solid food for weeks after the temperature has reached normal is the practice of some of our ablest physicians. Convalescence must be carefully watched, and delay in getting out of bed, or off of lounge, will meet with strong opposition from our most tractable patients. All through this tiresome stage of the disease I continue the use of the beef peptonoids as the best recuperative tonic, and it will serve its purpose well. For the disagreeable sensations, amounting oftentimes to pain, in the region of the ascending colon, I find occasional painting with tincture of iodine, alternating with inunctions of sweet oil, of great value. For months after the attack the patient should wear a broad flannel bandage, secured by tapes or safety pins. Where anæmia has resulted, or where a tonic is required in the shape of iron, I prescribe:

℞.—Quiniæ sulph..... ℥j.
Tr. ferri mur..... ℥ss.
Syr. simple..... ℥ss.
Aquæ .....q. s. ad ℥vj.
M.—S. ℥j three times daily.

It may be worth while to call attention to what may seem a small matter, but the typhoid fever patient, as convalescence appears, finds, in his weakened condition, great difficulty in getting into a sitting or semi-sitting position to receive nourishment, or to have his pillows shaken up. The appliance recommended by Professor Billroth, of Vienna, consisting of a smooth,

strong bar attached to broad, strong straps secured at the foot board, will make all such motions very much easier, and will remove elements of danger more or less present in all cases of typhoid fever. Such appliances will be found useful in many other diseases, and also in child birth.

The treatment of such severe fever requires unremitting attention. As we have said, hygiene stands first, and this includes a reasonable allowance of fresh, pure air and sunlight, and when possible the advantages of the open fire, where not only ventilation is secured, but where the poisonous materus morbis is consumed. All dejections should be immediately removed and disinfected, and some reliable disinfectant should be generously employed about the house. Sunlight and fresh air will be found to be the very best, but artificial assistance is almost always required. And last, but not least, the patient must receive that consideration due to the sick and depressed. The kindly look, the friendly nod are all beyond price in value, but the visits of friends are apt to be injurious, and the physician who has suffered from the attention of those who meant only kindness in their long, tiresome calls must bring this to mind when he is in charge of a sick room. There is no disease with a more depressing or tiresome convalescence; no sickness where fortitude and patience are more requisite; no enemy so treacherous, and no recovery more grateful. Attention to the little details required, firmness, kindness, intelligence and good nursing are worth more than all the drugs which modern pharmacy can produce. It is in the face of such difficulties that we recognize the fact that the wisdom of man is but foolishness with God.

TYPHOID FEVER.

By J. A. DeARMAND, M.D.,
DAVENPORT, IOWA.

IT is doubtful if there is a disease in the entire list whose treatment is so completely a matter of individual opinion as is typhoid fever. There are those (and they are in the majority, too) who see in the disease a crying need for the reduction of the fever at whatever cost; these are the advocates of the newer antipyretics, and the faithful few whose watchword is not "Excelsior," but "quinia." The many who claim that if the fever is not kept at a safe mark the patient will be practically burned up, stand guard with the coal tar derivitives (whose name is legion, and whose multiplication bids fair to send the bitters men to the financial wall) and fire away at that fever. The advocates of quinia see the ever-present malarial element in every case. Then, there are the hydropaths, and the watch-and wait ones, who do nothing, and blame Providence if the outcome is not satisfactory to the friends.

Out of the jumbled mass of plans, the young doctor will settle on one, and probably have occasion to regret his selection in the end. Upwards of twenty years ago, when I began the practice of medicine, I had very few, and those few very poorly, defined ideas, concerning the treatment of typhoid fever. The first case that I had I availed myself of the counsel of two venerable friends, who were aching to help a young man along, and who asked no other pay than the right to inform an all too-inquisitive public that the "old" doctor was behind the case. I will not weary the reader by recounting what sort of a dance I gave that patient —ably assisted by my friends. One said, give him quinine, and I did, until the good wife was forced to learn the deaf and dumb alphabet to keep the news and fresh events from escaping the patient's vigilance. Some of the most painful sights I ever witnessed were on the occasions of my visits, when the good wife was yelling her vocal cords bare trying to tell her husband that the doctor said, "you are doing very well." Then the other doctor said, if I would escape sequelæ, I must give turpentine, and I gave it, as he had done with such remembered success. Whether it was the amount of turpentine, or the eggs that acted as guides, or whether it was the lack of white lead, I know not, but any way, if I had not let up suddenly on that combination I feel sure there would not have been any chance for sequelæ, for there certainly would have been a letting up on that everlasting query, "what did he say?" All the time the patient was drawing nearer and nearer the dark shore, and all the time I was admonished to push the quinine and the turpentine. And I did push both—out. I realized that I would be the one to suffer if my patient got away, while a generous public would give my venerable friends the credit if I continued to call

them in to see the case. I proceeded to give some things that would not cause a calamity, even if they did not avoid one, and devoted myself to the nursing of that patient as no doctor ever had done in that bailiwick. In the end the patient got well, and I got credit for being an awful good doctor, but as a matter of fact, had not the patient had the constitution of an ox, he would have found out all about the workings of the New Jerusalem long ago if asking questions were allowed.

At one time or another it seems almost every article in the materia medica has done service, singly or in combination, for the cure of this disease. Even yet quinia is pushed until the failure to hear Gabriel's trumpet may be an unexpected charge that will astound the enthusiasts for that drug. The boomers are finding out that the faithful use of the newer antipyretics will give reason to modify the enconiums which enthusiasm has placed on these remedies in the first gush of discovery.

The treatment I have adopted is given below, and while it is not new or start ling, it has the merit of being simple, and, if it does no good, it can do no harm, which is a great deal more than can be said of many plans of treatment. The use of the zinc salt, I believe, is original with Dr. Waugh. I do not know to whom the credit belongs for the use of salol. I am in the habit of giving the sulpho carbolate of zinc in 5-grain doses (preferably in pill form) alternated with 2 to 5 grains of salol if the zinc does not control the diarrhœa and the borborygmus. This, with quinia in tonic doses and liquid food, given with clock-like regularity, constitutes the routine treatment. Symptoms calling for other remedies are met by their appropriate drugs as they arise, and the details of successful nursing need elucidation nowhere so surely as in typhoid fever. I have found that the repugnance to food of all kinds can be best overcome by the giving of liquid food at stated times and with the same regularity observed in giving medicine. Since I began to use the zinc salt, I have had no serious trouble with intestinal hemorrhage and the other bowel symptoms, which often prove so annoying and so seriously interfere with the patient's rest, are reduced to a minimum. It may be true, as pathologists aver, that there is no absorption of poison from the intestinal lesions, but the fact that intestinal antisepsis well maintained, does more to secure rest and comfort than drugs, should encourage us in the use of remedies of that class. If fewer efforts were made to cure the disease, and greater ones were made to treat the patient, this disease would not be looked upon as so formidable. The persistent efforts to reduce the fever at all hazards, is seldom successful, and when successful, the patient will be found to have been the battle-ground for a questionable victory. It is a great mistake to suppose that the reduction of fever is all there is to the treatment of typhoid fever. It is like curing entero-colitis by stopping the diarrhœa. To go at every case of typhoid fever in a hammer-and-tongs style, is to invite defeat, while to support the system with appropriate food, and to meet the symptoms as they arise, is to secure the greatest measure of success.

TYPHOID FEVER IN NEWBURYPORT, MASS.

By E. P. HURD, M.D.

I DO not remember that there has been an epidemic of typhoid fever in Newburyport for more than twenty years. Sporadic cases are frequent, but deaths from this disease do not exceed five or six a year out of a population of fifteen thousand.

This is doubtless due to an excellent water supply, and to the admirable drainage, and good sewerage system of the city. The drinking water of our city comes from the Bartlett springs, two miles and a half distant. These springs, by their location, are protected from all contamination. Lowell, which is supplied with potable water from the Merrimac, has the past year suffered severely from an epidemic of typhoid; naturally the Merrimac takes the sewage of Manchester and other towns above Lowell.

Formerly Newburyport was supplied with drinking water from wells, and I believe that typhoid fever was more frequent then than now, although I have no statistics at hand to show this. I know that it was sometimes possible in former years to refer local attacks of typhoid fever to pollution of wells. Sometimes, on the contrary, it was impossible, as it often is at the present day, to assign any cause. This is especially the case when the disease presents itself, as it certainly not seldom does, in country places where

the surroundings seem to be as healthy as could be desired. I recall many such instances in an experience of twenty-seven years.

In 1867 I attended the family of H. W., of Shipton, Canada. Location of residence six miles from the nearest village (Danville); half a mile from the nearest neighbors; site a hill side, with hygienic surroundings exceptionally good, and the source of water supply a spring above the dwelling. In this family four were stricken down with typhoid fever, and one died. I remember that, at the time, I puzzled myself much over the question of the origin of the contagion, and I could find no clue to a solution of the question. We can generally trace the breeding place of the germ to filth somewhere, but in this particular instance the general neatness and tidiness of the premises were noteworthy. I think that country physicians often find the same difficulty before them when called to account for sporadic cases and family epidemics.

Since the establishment of our Newburyport hospital, the majority of cases of typhoid fever occurring in the vicinity are sent there for treatment. We put the patients into airy, sunny, well ventilated rooms in the upper story of the building, and under the excellent care of an efficient staff of hospital nurses; the great majority of cases recover. Not much medicine is given. If the fever runs high, 103 to 105° F., acetanilid is prescribed in 5-grain doses every two hours till the fever falls one or two degrees. Cold sponging is frequently practised; the patients are fed with milk or broth, a small cupful, every two hours. Alcoholic stimulants are given freely, if there be any indication as danger of heart failure. A common prescription (at least with me) is a tablespoonful of whiskey in a glass of milk every two to four hours. Sometimes, as in states of great prostration, a tablespoonful every hour. I think that it is seldom expedient to exceed this amount.

Certainly very many cases get along well without a drop of stimulant from the beginning to the end of the fever. When there is a dry tongue and much tympanites the oil of turpentine, according to the formula of the late Dr. G. B. Wood, has proved very beneficial.

I think that patients suffering from typhoid fever, however mild the type, should, as a general rule, be required to keep their bed. Cases of a "walking typhoid" may turn out badly if allowed to roam about. One such patient comes to my mind. A middle aged man, residing in Oldtown, who was taken sick of typhoid fever in the fall of 1878. The disease was so mild that the patient insisted on sitting up all day long, attending to correspondence and other light business, even doing some "chores." He doing well till hemorrhage from the bowels set in; this proved uncontrollable, and the man died in less than a week. I have always regretted that I did not insist on this patient taking his bed and keeping it from the very first.

Another caution. We cannot be too careful about allowing solid food till convalescence is pretty well established; the reason for this caution is sufficiently apparent.

TYPHOID FEVER IN ST. MARY'S HOSPITAL.

By W. J. O'REILLY, M.D.

DURING the year 1891, thirty-four cases of typhoid fever were treated in this hospital. The treatment, during the first nine months, consisted of cold sponging, with the administration of salol. Four deaths occurred.

After October 1, the administration of salol was continued, but cold baths were substituted for cold sponging. The method of giving a bath was as follows: Place the patient in a bath-tub partly filled with water of a temperature of 90°, then gradually add cold water until the temperature of the water in the tub was reduced to 75°. Permit patient to remain in the tub fifteen minutes, when he is placed between blankets and rubbed dry. The baths were repeated every four hours, if temperature rose above 103°. Notwithstanding the fact that more cases were treated during the last three months than during the previous nine, not a single death occurred. A number of the patients were admitted to the hospital with temperatures varying from 104° to 105°, but, after one week's treatment with cold baths, the temperature seldom rose above 103°, and no further bathing was necessary.

The only beneficial effect that could be attributed to the administration of salol was the lessening of the tympanites. It did not appear to have any effect in

lowering the fever or in shortening its duration.

While I would like to resort to cold baths in private practice, I have never found it possible to do so, but have been forced to content myself with sponging the patient. I have used salol a number of times in private practice, but, on account of unlooked-for results (in two cases), have discarded it. In the first of these cases, the patient had been sick ten days, with temperature never rising above 103°. Salol had been administered from the onset of the disease; suddenly retention of urine took place; salol was discontinued, and in twelve hours the retention was relieved. Wishing to satisfy myself as to the cause of the retention, I again administered salol, and in twelve hours retention again took place.

In the second case the patient had been sick one week, with temperature rising as high as 104°, and was under treatment with salol when the same mishap—*viz.*, retention of urine—occurred. I immediately discontinued the salol, and have not since prescribed it.

SAGINAW, E. S., MICH.

CONCLUSIONS AS TO THE TREATMENT OF TYPHOID FEVER.

BY FRANCIS L. HAYNES, M.D.,
LOS ANGELES, CAL.

I. ALL antipyretic medication is probably injurious.

2. The systematic use of cold bathing is invaluable. I would like to refer to Dr. J. C. Wilson's excellent lecture in International Clinics.

3. Would not Kibbee's cot be useful in cases which can be moved with difficulty? (J. R. Haynes.)

4. Keeping the constant application of bags filled with ice to the head and abdomen, has no appreciable influence on the temperature, and I have tried it most thoroughly. Why?

5. In a few cases, terminating in recovery, in which the patient could not be gotten into a bath-tub, the following plan (suggested by Ringer) enabled the attendant to keep the temperature down, though it must be regarded as but a poor substitute for bathing; towels were rung out in ice-water, applied to chest and abdomen, and changed every two or three minutes.

6. Alcohol is rarely required, and when required, is most useful in small doses (teaspoonful of whiskey with milk, every two hours).

7. Two quarts of milk daily is the maximum quantity which should be used. Any more is apt to produce diarrhœa, with very fetid stools.

8. The best purgative is castor oil (drachm doses). Beef-tea is a fairly reliable purgative in this disease. I never prescribe it for any other purpose in typhoid.

9. Turpentine has an excellent influence on the intestinal lesions. It prevents intestinal hemorrhage.

10. Digitalis has no beneficial influence on the failing heart of typhoid.

11. Coca, as a stimulant, or for any other purpose in typhoid, is worse than useless.

12. The best treatment for intestinal hemorrhage consists in keeping the patient stupefied by hypodermetic morphine; in keeping him absolutely quiet, and in preventing anything whatever from being administered by the mouth or rectum for several hours. Thirst may be allayed by washing the mouth frequently. Feeding should be very cautiously resumed.

13. Should laparotomy be made for intractable hemorrhage?

14. Perforation should be treated by laparotomy.

15. The future of the treatment of typhoid: bathing, intestinal antisepsis, judicious feeding, and rest.

A NEW METHOD OF SKIN-GRAFTING.—This is thus described by its originator, Ereberto Aievoli: An animal, with well-developed testes, is castrated. The organs are washed in the usual salt solution, and then cut in thin sections, which are placed in a salt solution. The granulation surface, after being cleaned, is covered with small pieces of the testicles, these being placed one or two centimeters apart. Antiseptic dressing. Good results are claimed, which Aievoli thinks are due to the marked biological activity of the cells implanted. In experimentation he used sections of the salivary and mammary glands and the testes.

—*New York Medical Record.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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TYPHOID FEVER.

WITH all that can be said as to the value of hydrotherapy in the treatment of typhoid fever, the fact remains that it is a weapon with which to combat one symptom of the disease—the pyrexia. It does not aim at the cause; it does not strike at the disease where its operations are localized chiefly; it simply leaves the specific cause to continue its work without interference, while the only effort made is to smother over and mask the evidences of the disease processes. Hence, while the use of water was a step in advance, in that it gave better results than the preceding direction, it was by no means the last step; nor was it really a step in the right direction. It was simply a better application of the old, vicious principle of treating symptoms while disregarding the cause.

As to the use of intestinal antiseptics, the reasons are so obvious that "he who runs may read." A specific germ is introduced into the body, nearly, if not always, by the mouth. The germ multiplies in the intestines; it produces in them its most characteristic effects, and from the bowels it and other morbific microorganisms penetrate to the circulation and invade the various tissues of the body. What is more obvious than the propriety of attacking these disease germs in the intestinal canal, destroying them there, and preventing the development of toxic products, which otherwise are absorbed into the circulation and complicate the condition? The attack is thus limited to the action of the bacteria that have already passed out of the intestinal canal into the circulation; and this limitation is of infinitely greater importance than the mere smothering of high temperature; for when a typhoid fever is deprived of its allies, and reduced to the effects of the typhoid bacillus alone, and even this is deprived of its breeding ground, its source of reinforcements, the affection is a comparatively simple and harmless affair.

The substances used as intestinal antiseptics are various, as each new writer on the subject feels it incumbent on him to advocate an agent of his own introduction. This is quite natural; as little glory is to be had from the advocacy of another man's ideas. Accordingly, we find that the naphthols, salol, corrosive sublimate, and many others have their friends. And in this class we very likely should be numbered, as we have a firm conviction that the best of all intestinal antiseptics is the sulpho-carbolate of zinc, our own special favorite. We do not find any other as efficient and as free from irritation or noxious qualities. Given at the earliest possible moment, in doses of 2½ grains every one to three hours, it sees many a threatened typhoid disappear, and reduces the others to an innocuous state. Given in the later stages, after Peyer's patches have broken down in ulcers, the zinc still serves as a useful palliative, but nothing more; the mischief is done, and the intestinal canal is no longer the only battle field. The zinc salt keeps the canal aseptic, but it does not prevent hemorrhage or promote cicatrization as well as turpentine does. Many physicians have overlooked this fact, and made their first trial

of the sulpho-carbolate in the advanced stages of serious cases, when their usual treatment has proved ineffectual. The zinc salt then fails to remedy a condition for which it is not indicated, and the doctor concludes that the sulpho carbolate is only "one of Waugh's hobbies," and that its advocate possesses more enthusiasm than judgment. If the physician makes it a rule to administer this drug in every case as soon as he begins to suspect the presence of typhoid fever, he will find his confidence in the sulpho carbolate increase with every trial; and when the years drift by and his list of typhoid cases grows longer, without a single death to mar the record, he will agree with the writer in crediting this drug with properties of great and unique value.

W. F. WAUGH.

Letters to the Editor.

SULPHO-CARBOLATES IN THE TYPHIC FEVERS.

YOUR head is level on the sulpho-carbolate of zinc in that class of fevers that are called typhoid, continued, or enteric, or, further still, typho-malarial. The zinc salts, as the negro would have it, is very anticipating in this class of troubles. F. H. WILLIAMS.

GERMANTOWN, TENN.

TYPHOID FEVER.

I HAVE with much pleasure read your pamphlet on "Typhoid Fever." In a practice of twenty-seven years I have lost but one patient, and he, before I was a mile from his house, got out of bed and ate cold potatoes, pie, etc., and died in twelve hours. Since you first advocated the use of sulpho carbolate of zinc, I have used it, but in all truth say I have never yet seen any better result than my old plan of treatment. I give the first week or ten days ½ to 1 grain calomel at bedtime. If the fever goes beyond 102° I give acetanilid, phenacetine, or antikamia to reduce the temperature. As soon as tongue is red and dry I give Wood's turpentine mixture; use turpentine over bowels, milk diet until fever is broken, then for a week or ten days afterwards with milk, beef tea. I use quinine 1 grain every eight hours; digitalis if heart is weak, and sponge with tepid water when heat is great. When bowels are very lose I give salol and bismuth or arsenite of copper. I have had but one hemorrhage. I just treated five cases in one family and had them out in four weeks, while the mother was treated by another doctor and it is eleven weeks and the fever is not broken yet. He won't use turpentine or milk.

W. S. CLINE, M.D.

WOODSTOCK, VA.

SINCE I wrote to you I have changed my opinion on sulpho-carbolate of zinc. I have two cases of typhoid fever convalescing on the thirteenth day, and give the credit to the zinc. For two years I gave it in solution and saw no results. To these I gave it in capsules, and the temperature went down from 104° to 100° and 101° and then to 99°.

W. S. CLINE, M.D.

TYPHOID FEVER.

IN the winter of 1887, I was called to see a couple—Mr. and Mrs. H.—husband and wife, who had just been through a protracted sickness of about three weeks, and was in a fair way to recovery.

The doctor who had previously attended them being in poor health, and not able to ride, and the family living about four miles in the country, I was requested to attend them in his place.

From the history of the cases I could get, I decided they were typical cases of typhoid fever, and, as they were slowly on the road to recovery, I prescribed tonics and supporting measures.

The father of Mr. H. was a very intelligent man, and had assisted in nursing a great many patients through different diseases, but he would not admit that I was right in my diagnosis; but, as to this, we will see in the cases following, which I give here.

The question was, Where and how were these two persons exposed to the disease?

During the holidays, the couple had visited the parents of Mrs. H., who lived in the Northern part of Indiana. In the family was a hired hand, who was, at this time, sick some four or five weeks. The disease was not known at the time. While

there, they assisted in the care and nursing of the hired hand. After they had returned home to Ohio, in about three or four weeks they had the prodromic and typical fever of typhoid, which lasted about two or three weeks. At this time I was called. I made two or three visits. They had the peculiar, protracted convalescence of typhoid fever. As they had gained strength so as to be out of bed, I dismissed the cases.

In about ten days, I was called to see two other members of the family who were sick; one the mother of Mr. H., and the other the wife of Mr. H.'s brother.

The father, mother, sister, and Mr. H. and wife, lived in a large house on one end of the farm, while Mr. H.'s brother and wife lived in a small house at the other end, about sixty or seventy rods apart; but they all used water from the same well. I now told them with emphasis that I believed the contagion was in the water of the well.

The temperature of the mother never was over 100° at any time. She never, at any time, was so sick but what she could get up and get around some. The fever lasted about two weeks at most. When I made my visit to the brother's wife, the sister was there helping to take care of her. But, when I made my visit next day, the sister was in bed with considerable fever, also. In two or three days the fever in both patients had reached its height, and continued so for three or four days, when it then gradually dropped down to normal. The fever was never very high—about 103° F., nor did it last much over two weeks in any one of the patients. In a short time after this, the brother had a week or ten days of a slight rise in temperature, with considerable indisposition, but never so much as to be confined in bed. Each couple had a baby of about fifteen months and ten months of age respectively. The oldest child was thought to have had a slight fever a few days, with considerable peevishness. The characteristic protracted convalescence of six to eight weeks to full vigor and health was shown in all the cases.

The treatment was, in all the cases for fever, aconite, veratrine and small doses of digitalis. Antiseptic treatment for the bowels was given in the way of a few drops of carbolic acid in water and glycerine, three or four times a day. The treatment was very simple, and the main dependence was on good care and nursing.

In about two months—about the latter part of April—I was called to see a cousin, a boy of about seventeen, who had come into the family to live and work for them. He had been with them about three weeks. He had all the indications of typhoid fever that the rest had had, and, with the same treatment and care, he run through, in about two weeks, the same conditions of fever, with afterwards the same characteristic convalescence.

Here were two persons on a visit and, without precautions, in contact with disease, and in the incubative stage returned home, and, when they were fairly on the way to recovery, three others take down, and in a short time another one, and probably the child; and then, in about two months, another person comes into the family to live, and is taken sick also. The only one exempt from disease was the father, out of a family of eight persons, with two babies.

I could not make out clearly that the first doctor had made out that it was typhoid fever in the first couple; but I was certain no precautions had been taken by which the rest of the family would not be infected, until it was too late, and the germs of the disease had contaminated the water of the well, the water of which all drank without any precautions being taken.

I have given these cases to show how the probable course of the contagion may have to be traced, and how it will remain in one place for months after. It is hard to say how much longer the germs remained there, as there were no more persons in the same family to be exposed, with the exception given.

GOULD SMITH, M.D.
TAYLORVILLE, ILL.

TYPHOID FEVER.

AT the present time when we recognize the fact that typhoid fever is a self-limited disease, and is caused by a special germ, for which we have no specific remedy, we should treat it with antiseptics, salol, iodine, turpentine, hyposulphites, of soda, sulpho-carbolates, etc. Husband the patient's strength, feed him, bathe him, give him to drink all the fresh cold water his system demands, enforce free ventilation, disinfect the discharges and put the room, house and premises in a good hygienic condition. My method

of treatment is, if I see the patient early, and there has been no diarrhœa, to clear the intestinal canal of the decomposing mass of vitiated secretions, dead tissues and undigested food which form a prolific soil for the development of the typhoid bacillus, the pyogenic-bacteria and any number of unknown micro-organisms that carry on their work while the forces of nature are powerless to inhibit their functions, and put the tract in as nearly an aseptic condition as possible. For this purpose I use calomel and sulpho-carbolate of zinc. One of the former to four of the latter every three to four hours, until the bowels are moved freely. The calomel produces an increased flow of bile, nature's antiseptic, which materially aids in disinfecting the intestinal tract.

There is unquestionably some poison introduced into the system, either a micro organism, ptomaine or something else, and the first deleterious effect of this poison upon the system is to disturb the normal functional activity of the liver, which is manifested by a diminution in the quantity and quality of bile secreted. As a result of this disturbance of the hepatic function the intestines are deprived of their requisite quantity of biliary secretions, which acts as their normal disinfectant; consequently the intestinal digestion and absorption is incompletely performed. And just here we have an indication for the use of the fel bovis inspissatum, which I have used with supreme satisfaction. It increases the perfection of the intestinal digestion prevents decomposition and the temperature is maintained at a moderately low degree throughout the disease.

As there is nearly always a malarial element present in this section of country, I thoroughly quininize the patient in the beginning of the fever and then give him the following prescriptions:

℞.—Ext. nucis vom..... gr. iv.
Zinci sulpho-carb.,
Quiniæ sulph..... āā ℈ij.
M. and ft. Cap. No. 20. Sig. one every six hours.

℞.—Magnesii sulph..... ℥iv.
Acid nitro. nur dil..... ℥iv.
Syr. rhei arom..... ℥iij.
Aquæ menth. pip.....q. s. ad. ℥iij.
M.—Sig. Teaspoonful in wineglass of water every six hours.

The sulphate of magnesia in 10-grain doses, is decided diuretic, and diuretics are positive antipyretics, aiding as they do the system to rid itself of effete material, one of the chief elements in maintaining the abnormally high temperature.

When the indications for turpentine, as pointed out by Dr. Wood, arise, I have used it with the happiest results. But I have rarely had occasion to use it since I commenced to use the sulpho-carbolate of zinc. When there is soreness of the bowels and tympanites I use turpentine locally. I have found that sponging the patient with warm water and alcohol is the most efficient means for combating the pyrexia, provided it is properly employed.

It invites the blood to the cooling area of the body and causes a rapid excretion of heat, and acts as a stimulus to the skin and renders it more active—one great object to be obtained. I usually have a portion of the body sponged at a time, and at the same time have an assistant to gently fan the part to cause a more active evaporation, and then rub the skin perfectly dry before another portion is bathed. This is kept up until the temperature is sufficiently reduced. It is very refreshing and soothing to the patient and he soon drops off into a quiet sleep.

Where complications arise I treat them on general principles. The duration of the disease here is from three to six weeks.

J. H. Coffman, M.D.

Dalark, Ark.

PUERPERAL CONVULSIONS.

In answer to Dr. O. McLeod Smith (Times and Register, August 13, 1892, page 189), I would say I fear he has not read the works of Dr. Gordon, of Aberdeen. Dr. Gordon, a man of sense, says that the disease, when left to nature or improperly treated, generally proves fatal, and he very correctly advises prompt and copious bleedings. Gordon lost nineteen out of thirty-eight cases that he encountered in his epidemic. "If," says he, "either the quantity of blood taken away at the two bleedings had been taken away at the first bleeding, or the purging been continued, which was exchanged for sweating, I am thoroughly convinced that we should have been able completely to overcome the disease."

He subsequently attended thirty-nine cases of the disease, of which he lost only ten, and saved twenty-nine, so that of his whole epidemic, forty-nine patients recovered and twenty-eight died.

Dr. Gordon says: "When I took away only ten or twelve ounces of blood from my patient, she always died; but when I had courage to take away twenty or twenty-four ounces at one bleeding in the beginning of the disease, she never failed to recover."

Gordon says this bleeding must be done within six or eight hours after the attack, or it will fail.

Bloodletting is never truly useful except when it is able to destroy the malady at a blow and blot it out.

Dr. Lees' table shows seventy-two that were bled recovered.

I am satisfied if the doctor had bled his patient at the start, twenty or twenty-four ounces, he would not have had to resort to the hypodermic injection of morphine or the pilocarpine. I would have used chloroform if the bloodletting failed. I had a case like his, and I treated her by bloodletting and chloroform, and I am quite sure the bleeding and chloroform saved my patient.

Z. R. MILLARD.

THACKERY, ILLINOIS.

A MORPHINE CASE.

I WISH to report a case of morphine habit, which has been under my observation for a considerable time.

Mrs. M., a married lady, thirty-two years of age, has been addicted to the morphine habit for about seven years. For about five years she did not menstruate, and neither was she pregnant at any time during that time. About two years ago she made an attempt to become rid of the habit, and for about forty days took no morphine or opiate of any sort. After having been without morphine for twenty days the menstrual flow appeared, and since that time (about two years ago) she has menstruated at intervals varying from two weeks to two months.

The point in this case which is particularly startling to me is the amount she is able to take. She now takes regularly two one-eighth ounce vials of morphine a week, and sometimes more. I have actually known her to take an eighth-ounce vial of morphine in the twenty-four hours. And what is more, she can take this amount and still be up and about the house. As I said before, I have known her for some time (almost five years), and during that time I have never known her to neglect her work on account of a séance with the drug. She is known to be the neatest housekeeper in this country, and is certainly a very neat woman. She seems to enjoy very good health and is always in a presentable condition.

J. G. PACE, M.D.

ELWOOD, NEBRASKA.

THE CHLORIDE OF SILVER DRY BATTERY.

NOTICING that the merits of the dry cell were under discussion in your journal, I beg leave to state that when the Barrett Brothers, of New York, first invented their sealed cell I secured several of their batteries. That was eight years ago, and I have a fifty cell galvanic of their make, the voltage of which has been but very little reduced after being in occasional use for electro-diagnosis during all that time, at least twice weekly for a quarter of an hour, and for the last six months my son has used it daily in electrical engineering tests of resistances in telephone work.

A faradic of four cells, and another galvanic of fifty cells, made by the Baltimore Company, in which Barrett is consulting electrical engineer, I have had in almost daily use, averaging ten minutes per day, for two years past, and not one of these batteries have needed refilling, nor have they given the least trouble to me in getting them ready for use, or so far as current strength is concerned, beyond an occasional looking after connections and taking care that some uninformed person did not destroy the cells by interfering with them; and in this necessity for care, and knowing what one is about, lies the secret of getting effective work out of any instrument. Long before the days of the dry cell there was an incessant complaint by physicians, who knew but little of electrical appliances, that the acid batteries were nuisances and always out of order, when it was their want of knowledge that made them useless.

A friend of mine had a dry cell chloride of silver battery contemptuously stuck away in a closet as worthless, and a peppery correspondence had been kept up between him and the manufacturer. Upon the merest inspection of two seconds I discovered that a little lacquer had run over one of the brass strips so as to insulate the connections from one another, and in

two seconds more a penknife scraping set the faradic to buzzing with a current strength that my friend could not endure.

At another time I witnessed a salesman in an instrument store gravely instructing a purchaser how to make connections with one wire in a primary and another in a secondary connection, and both concluded the machine was of no account.

The most frequent trouble comes from short circuiting by leaving some means of connection between the nipples in the box, either water or the cord terminals, or sometimes a metal instrument. An office partner of mine cooked my last fifty cell battery all night on a hot steam coil, but it is still working, though I wonder at its doing so.

If only half the people know how to use a watch properly it isn't to be wondered at that so delicate, but effective, an apparatus as a chloride of silver cell needs at least intelligent care. For that matter, many people abuse their stomachs and growl at the resulting indigestion.

If physicians will seek the opinions of electrical engineers as to the merits of batteries, they will find that they not only approve of the chloride dry cell, but use them constantly in their tests, and laugh at the bungling of parties who would denounce any kind of an electrical instrument as an excuse for clumsiness and ignorance of the principles involved.

S. V. CLEVENGER.

70 STATE STREET, CHICAGO.

Book Notices.

AN AMERICAN TEXT-BOOK OF SURGERY FOR PRACTITIONERS AND STUDENTS. Edited by WILLIAM W. KEEN and J. WILLIAM WHITE, Philadelphia: W. B. Saunders, 913 Walnut street, 1892. Sold by subscription only. Price $7.00, cloth.

We have here a work by American authors, who are also teachers and active practitioners of surgery. Not only this, but we are told that each has had the opportunity to revise the proof sheets of the entire work; so that the book as a whole, may be looked upon as the result of the joint labors of the thirteen authors. Many of the illustrations are original; especially the bacteriological colored plates, and the half tones.

The authors who unite in the production of this fine work are: C. H. Burnett, P. S. Conner, F. S. Dennis, W. W. Keen, C. B. Nancrede, R. Park, L. S. Pilcher, N. Senn, F. J. Shepherd, L. A. Stimson, W. Thomson, J. C. Warren, and J. W. White. We regret that the limited space allotted for book notices in this journal will not permit an extended notice of this fine work. The physician who desires a modern system of surgery, an exponent of the best and most recent work, by men whose names give authority to the opinions expressed, will find what he needs in this book.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By JOHN V. SHOEMAKER. Second edition, revised and enlarged. New York: D. Appleton & Co., 1892.

The new material relates to micro-organisms, local antisepsis, electricity, hypodermic medication, the nails, etc., etc. The colored plates are a decided improvement on those in the first edition. The work is now a fine volume of 878 quarto pages. It is quite a cyclopedia on skin diseases; the only fault we have to find with it being this cyclopedic character; the accumulation of so many remedies for each diseased condition, and the absence of guidance in the selection. Out of ninety-seven local applications for acne, one may, perhaps, select the right one, but how is he to do it?

ESSENTIALS OF MEDICAL DIAGNOSIS, FOR STUDENTS OF MEDICINE By SOLOMON SOLIS-COHEN and AUGUSTUS A. ESHNER. Philadelphia: W. B. Saunders, 1892. Price, $1.50; Cloth, 8 vo, pp. 382.

This book is decidedly above the average of quiz compends. It would be useful to an old practitioner, whose library dated from his student days, or to a student in term time, who had already studied well in the text-books, and wished to refresh his memory on matters already mastered.

THE PRINCIPLES AND PRACTICE OF BANDAGING. By GWILYM G. DAVIS, M.D. George S. Davis, publisher, Detroit. Cloth, price, $3.00.

The book is printed upon extra heavy paper of fine quality, and is freely illustrated. It is a very handsome work, and justifies the apparently high price for a book of 61 quarto pages.

MEDICAL AND DENTAL REGISTER-DIRECTORY AND INTELLIGENCER FOR PENNSYLVANIA, NEW JERSEY AND DELAWARE. George Keil, editor.

Contains the State laws, society intelligence, list of all medical and dental colleges in the United States, etc., etc., besides the directory proper.

The E. A. Yarnall Co. has issued a catalogue of surgical paraphernalia, comprising 344 quarto pages; freely illustrated. It is quite an armamentarium, of later date than Tiemann's, and without the useless instructions contained in that firm's catalogue.

Dr. Geo. E. Petley has published in a one hundred and nine page pamphlet the report of proceedings in the case of the State of Arkansas against him for involuntary manslaughter; of which, we are glad to see, the doctor was acquitted.

AN EPITOMIZED REVIEW OF THE PRINCIPLES AND PRACTICE OF MARITIME SANITATION. By JOSEPH HOLT, M.D., New Orleans, 1892.

"JOE BROWN," DOCTOR ON ALCOHOLISM, ITS CAUSE AND CURE. New York, E. Scott, printer and publisher, 134 West Twenty-third street, 1891.

A right good, sensible little temperance tract; one of the sort nearly every man would read with interest and without taking offense.

ABSTRACT OF THE MINUTES OF THE MEETING OF THE STATE BOARD OF HEALTH OF THE STATE OF ILLINOIS, IN CHICAGO, July 27, 1892.

The Illinois Board makes the gratifying report that over one-third of our medical colleges now exact four or more years of medical study, and three or more terms of lectures, while 45 per cent. more require three terms and three years of study. Of the remaining 17 per cent. all but two are Southern schools.

We have received a memorial of Dr. P. A. Wilhite, who died in June last, at Anderson, S. C. Dr. Wilhite was a graduate of the Medical College of South Carolina, class of 1852. He was at the time of his death a member of the State Board of Health, and was prominent in the Masonic order, and was buried with the honors of the craft. He was said to be the discoverer of ether anæsthesia.

OUTLINES OF TREATMENT WITH DOSIMETRIC GRANULES; FROM THE STANDPOINT OF THE GENERAL PRACTITIONER. By W. F. WAUGH. Published by *The Medical World*, 1892. Cloth, 18 mo., pp. 103. Price, 50 cents.

In regard to this book we are much in the position of the Irishman, who, when asked whether he plead guilty or not guilty, replied: "Wait till I hear the evidence." Judging by the rapidity with which the edition is being exhausted, the book seems to fill a want.

CONTRIBUTION OF PHYSICIANS TO ENGLISH AND AMERICAN LITERATURE. By ROBERT C. KENNER. Geo. S. Davis, publisher, Detroit. Paper, price, 25 cents.

The Medical Digest.

PHENACETINE-BAYER IN TYPHOID FEVER.—O. S. Ensign, M.D., (*Medical World*, January, 1892) writes concerning the treatment of typhoid fever: "Phenacetine, which I prefer to the other new antipyretics, by lowering the temperature, prevents delirium, relieves pain and restlessness, keeps the skin moist and the patient comfortable."

Wm. E. Quine, M.D., Chicago, reports (*Med. Recorder*, November, 1891): "In the majority of cases of typhoid fever phenacetine controls the temperature range without appreciable harm to the patient. The condition and comfort of the patient seem to be strikingly improved without in the least impairing his life prospects."

Wm. A. Jack, M.D., Washington, in the *New England Medical Monthly*, writes: "My experience with phenacetine-bayer during the last year has been somewhat marked, and I have been impressed with its value, especially in relation to typhoid fever. Case of a boy eight years old; when I first saw him, had been sick or complaining two days; pulse rate 130; temperature 104°; respiration 29. Ordered a prescription of calomel, soda bicarb. and phenacetine to be given in the morning, after the action of the cathartic, every two hours. Saw patient the next morning at 10 o'clock; had taken two powders. Examination: Temperature 100.5°; pulse 100; respiration easy and natural. Saw him again in the evening; the typical rise of the temperature in typhoid fever had taken place, but was only 101.5°; patient resting, not complaining of any pain. During the whole case, lasting twenty-one days before any convalescence could be said to set in, the administration of phenacetine was con-

tinued; temperature remained at 100° until the twenty-first day, when it became normal; convalescence somewhat slow but steadily progressive. I believe that in phenacetine we have secured the ideal antipyretic, without the deleterious and depressing defects of antipyrine, which I have never given, except with some stimulant. It would be needless to occupy more time and space, but in twenty typical cases of typhoid fever the best results have been observed. Temperature has been controlled in every case, and in but one case has patient been delirious. I have noticed that the administration of phenacetine is generally followed by a quiet sleep."

"As an antithermic in the hyperpyrexic conditions of typhoid fever, and in other fevers, its effect is all that can be desired."—*Arthur C. Davidson, M.D., Sharon, Ga.*

"In typhoid fever I administered it in 5-grain doses every four hours, during the day, for twenty-eight days. At no time did the temperature exceed 102° F., nor did any bad effects follow its use."—*M. B. Hermann, M.D., Memphis.*

"Dr. Sommer used phenacetine with great success in typhoid fever, confirming the favorable views of Masius and others. The dose for adults was 4 grains, repeated from two to four times during the twenty-four hours. Sixty cases were treated in this way, with but one fatal case, in which the patient was not subjected to phenacetine treatment until three weeks from the commencement of the attack."—*Lancet.*

"I have just discharged my third case of typhoid fever with phenacetine treatment. Duration of each case, twenty-one days. The skin was moist throughout. To an adult I give 8 grains of phenacetine, with 1 grain of quinine. It kept the temperature below 101° eight hours."—*W. S. Cline, M.D., Med. World.*

"After using phenacetine in eight cases of typhoid fever, I feel justified in endorsing Dr. W. S. Cline's treatment. Yet, instead of using it with quinine, I administer tincture of digitalis with it in medium doses four or five times daily, with very flattering results. I really believe that, particularly in typhoid fever, it is a more powerful antipyretic than quinine, besides possessing the advantage of controlling, in a marked degree, the nervous symptoms so characteristic of this disease."—*W. J. Mayberry, M.D., Med. World.*

"The greatest value of phenacetine seemed to be in its marvelous antipyretic properties, and its chief use has been in the treatment of typhoid fever. The drug has never failed in a single instance to produce a rapid and considerable lowering of the temperature, unaccompanied either by cyanosis, heart symptoms, weakness, or any other unpleasant after-effect. Three-grain doses were found to be efficacious."—*Dr. W. F. Waugh, Philadelphia.*

SHORT PAROXYSMS OF HIGH TEMPERAURE IN CONVALESCENCE FROM TYPHOID FEVER.—Bouveret directs attention to the very sudden and very short attacks of high fever which sometimes occur during the convalescence from typhoid fever, in cases in which he thinks it can be conclusively shown that they are not brought on by septicæmia, pyæmia, or any local complication. He gives detailed histories of four cases at Lyons under his own observation during the last three years, in which these sudden and short outbursts of fever have been a notable feature, and which have all completely recovered and remained in good health since their illness. The first was a man of forty, who had a well-marked but not serious attack of typhoid fever treated satisfactorily by cold baths, quinine and wine. His temperature at the end of the first week touched 105° F., but sank slowly and regularly to an average of about 101° at the end of the second week. On the sixteenth day, however, it rose suddenly, with a severe rigor, from 100° to 106°, and sank to 101° in a few hours; and a similar rapid rise and fall happened on the twenty-fifth and twenty-ninth days, on the latter of which it touched 107.5° and fell to 99° in less than twelve hours. The patient was under very careful observation, and no local complication of any kind could be detected; no suppuration, no pain, no cerebral injury. The rigors were very severe for an hour or more, and were quite isolated and at irregular intervals. There was no history of any malarial infection at any time. After the sixth week his convalescence was undisturbed, and he soon reached a state of perfectly good health which has been unaffected since. The three other cases were of a similar type, in which one or more of these sudden accesses of high fever (105° to 107°) occurred for less than

a day during an otherwise regular recovery without any perceptible complications. The tremor, the chattering of the teeth, and the feeling of cold, were as severe as in bad ague; but the intervals were very irregular, and the paroxysmal fever was very little influenced by large doses of quinine. M. Bouveret confesses himself imperfectly satisfied with any theory that he can give of the causes of these crises. They are too short for any type of secondary infection or septicæmia of which he has any pathological knowledge, though post-mortem investigation has shown him much damage done by septicæmia in typhoid fever. He at present prefers to regard them as signs of the discharge into the blood of large doses of a non-purulent but toxic and febrile poison from the lymphatic follicles of the intestine, at a time in convalescence when the balance of the temperature is most easily upset. He is glad to have been made to feel sure from experience that they do not necessarily indicate a grave prognosis.

—*Lyon Médical.*

The Immunity Conferred by Typhoid Fever (Potain, *Le Bulletin Médicale*).—One of the strongest arguments in favor of the specificness of typhoid fever is the immunity which is conferred by an attack of the disease. It does not seem to be so generally admitted that one attack of typhoid protects the individual from a second attack, as is acknowledged with referenee to variola, scarlatina, etc. Liebermeister ("Ziemssen's Cyclopædia") admits that there is such an immunity conferred, but rates the protection lower than that afforded by the other infectious fevers. The observations of Potain, however, would imply that the protection is considerable. He relates a case which occurred in the Hospital de la Charité, which was the first in which he had personally attended the same person in two attacks of typhoid fever. The first attack occurred in January, 1888, and lasted twenty-one days, and was in all respects an ordinary case of the disease, except that the eruption was unusually well marked. Quite recently (the journal is dated July 13, 1892) the same patient returned to the hospital, had a severe attack of enteric fever, and died on the twentieth day.

Chomel, in one hundred and thirty-four cases, saw but one individual attacked twice. Trousseau saw two, Budd four, and Bartlett three. In all, Potain was able to find twenty-six cases of double attack, and in only ten of these had the patient been seen both times by the same physician. Double attacks seem to be more frequent in Germany, for Lorentz reported nine instances in four hundred and five cases, and Eichurst twenty-eight instances in six hundred and sixty-six cases.

Brouardel reports four patients in the same house attacked with typhoid fever, all of whom had previously had the disease. Of these, the father, aged fifty-eight, had had the disease at eighteen; the mother, forty-five, had had the disease also at eighteen; the son, twenty-six, had had the trouble three and one-half years before; and the servant had had an attack five years before. The older people had severe attacks the second time, while the younger people had mild attacks, possibly indicating that the immunity conferred by the first attacks had decreased as the years advanced. Potain believes that the form which the case takes depends less upon the nature of the infection than upon the predisposition of the individual.—*Journal A. M. A.*

Royal Academy of Medicine in Ireland.—*The Dietetic Treatment of Enteric Fever.*—Dr. Wallace Beatty read a paper on the dietetic treatment of enteric fever. He laid great stress upon the importance of care, not only as to the nature, but also as to the quantity of food. He considered from two to three pints of milk in the twenty-four hours ample nourishment for enteric fever adult patients during the entire illness. He believed that patients who were fed on such a restricted diet suffered much less from diarrhœa, tympanites, and sleeplessness, than patients more liberally fed. He called attention to the fact that when from some cause, such as threatened hemorrhage, the diet of patients had to be much restricted, a great improvement in all the symptoms followed. He advised extreme care in the manner of changing the diet at the approach of convalescence—a sudden change from liquids to solid food was, he believed, likely to provoke a fresh outburst of fever and bring on a relapse.

A Case of Recurrent Enteric Fever Followed by True Relapse.—Dr. J. W. Moore submitted a "clinical record" of a case

in which, not only did enteric fever recur in the same patient, but the recurrent attack was succeeded by a true relapse after an apyrexial period of eleven or twelve days. In April, 1887, the author attended, with the late Dr. Alfred Hudson and Sir George Owens, a lad, aged fifteen, who passed through a typical attack of enteric fever, lasting twenty-three days, in which, however, constipation, and not diarrhœa, was the rule. In October, 1891, the same gentleman, at the age of twenty-nine, sickened of a fever which proved to be undoubted enteric fever. After running an acute course of twenty-four days, followed by a sub-febrile period extending over another week, this attack was succeeded by convalescence, which seemed to be, in all respects, normal. On the eleventh or twelfth day, however, from the establishment of apyrexia, acute febrile symptoms again showed themselves, and, for the third time in his life, the patient passed through an attack of enteric fever.

The President criticized one or two points in the clinical history of the case described by Dr. Moore, which occurred to him to need explanation. First, with reference to the significance of the diazo-benzole reaction. In his own experience —and he had applied the test almost daily to a large number of cases in Sir Patrick Dun's Hospital—he did not rely upon it as by any means a safe clinical test, either as to diagnosis or prognosis in fever, and did not agree with Dr. Moore that the failure of the test was due in any way to the fact that his patient had had fever fifteen years before. Secondly, he asked further information as to the clinical means of recognizing the very remarkable fact he recorded of the heart, in early and marked weakness, viz., having "sagged from side to side," which change of posture, when in his experience and according to the teaching of the late Dr. Stokes, the impulse of the heart in cases of typhus, softening cannot be felt at all in these cases, or at best with the greatest difficulty.

Dr. H. T. Bewley did not think the question as to relapses in typhoid could be solved until the whole question of immunity, natural and acquired, was more certainly known than it is at present—we do not know accurately why cases of infective fevers get well at all; possibly the greater tendency to relapse in typhoid fever as compared with such other fevers as typhus, scarlatina, and measles, was connected in some way with the long and irregular course, and prolonged termination of the fever. With regard to giving solid food, there are some cases of typhoid in which the fever will not come down, and the patient grows weaker until some solid food is given. It is a very difficult question to say exactly when the time has come to give this solid food, and he would look anxiously for further information on this subject. With regard to diet, he did not think one could be at all dogmatic, seeing that the practice of skilful and experienced physicians differed so much as to the amount of food they allowed.

Dr. Walter Smith said that Dr. W. Beatty's paper was essentially a qualification or limitation of Graves' celebrated maxim. But if it is possible to underfeed fevers, it is also certainly possible to over-feed them, and so to hurt the patient. Obstinate vomiting, for example, may be caused by too zealous administration of milk. The condition of the tongue is a more satisfactory guide, as to convalescence, than the temperature or pulse, and two weeks, as a rule, should be allowed of normal evening temperature before any liberties are granted to the patient. The diazo-benzole test applied to the urine of enteric fever is unreliable and unsatisfactory. It is merely a curious color-test for a chromogen in the urine.

Dr. Little considered there could be no doubt of the value of a restricted diet in enteric fever; there could be no doubt of the value of milk when diarrhœa is present; but some patients are unable to digest milk, and, especially if then danger arises from cardiac failure, he considered properly-made animal broths more suitable than quantities of milk. Though a matter which had only cropped up incidentally, as Dr. Moore had mentioned the use of quinine in his case of enteric fever, Dr. Little was tempted to ask why it was that quinine was so generally given in enteric fever? As far as he had seen, no good effect was produced by quinine in enteric fever, and sometimes headache, sleeplessness and intestinal disturbance resulted from its use.

Dr. Doyle also joined in the discussion.

Dr. Boyd, in his reply to the criticisms on his paper on the antiseptic method of treating enteric fever, considered that, so

far, no more rational method of dealing with the disease from its pathology presented itself, and, notwithstanding Dr. Smith's doubts as to any disinfectant reaching the intestine in sufficient strength to be of use after passing through both stomach and duodenum, he thought if any form of antiseptic could survive unaltered, the gaseous one should, especially in a solution which slowly parts with it. Chlorine evolved from an alkaline solution—such as the liq. soda chlorinated of B. Ph.—in his hands, was followed by better results than when formed in an acid mixture. As regards the relapses in enteric fever, they seem to him to be due, in most instances, to a fresh set of glands and Peyer's patches becoming the seat of fresh infection by typhoid bacilli. He lately showed an instance in a pathological specimen, exhibited at the last meeting, of a portion of the ileum, the seat of active ulceration in a patient who was ten days apyretic, when he died from acute perforation, the result of overeating. This specimen showed how long a condition of ulceration may exist after typhoid, even when the temperature has fallen permanently for as long as a week.

Dr. Wallace Beatty, in reply, said that he quite agreed with Dr. Bewley and Dr. James Little, that exceptional cases of enteric fever occur in which the evening temperature remains above the normal long after all the other symptoms of enteric fever are over, and where no discoverable complication is present. In these exceptional cases he agrees with Dr. Bewley and Dr. Little, that solid food cannot be withheld.

Dr. J. W. Moore, in reply, agreed with the President and Dr. Walter Smith, that the diazo reaction was open to doubt as a diagnostic of enteric fever; nevertheless, it was an interesting, and often a confirmatory, test of the presence of this fever. He did not depend solely upon palpation as a method of physical examination of the heart, as the President seemed to think, but both auscultation and percussion indicated undue mobility of the heart in his patient's case. In answer to Dr. Little, Dr Moore said that he sometimes gave small doses of quinine in enteric fever; not to reduce temperature, for fulfilling which object large doses alone would avail, but as a tonic, from his experience of the remedy in other acute and prostrating maladies. Once the specific origin of enteric fever was admitted, Dr. Moore believed that no mere error in diet would bring about a true relapse, although it may be a contributory cause of such an accident.—*Med. Press.*

THE FIRST SIGNS OF LOCOMOTOR ATAXY.—According to Prof. Fournier, the first symptoms of ataxy may be classed as follows:

1. Sign of Westphal.
2. Sign of Romberg.
3. The "Stairs" sign.
4. Crossing of the legs.
5. Walking at the word of command.
6. Standing on one leg.

1. Westphal's symptom is well known; it consists in the abolition of the pre rotulian reflex, and is present in two-thirds of the cases.

2. Romberg's sign can be thus appreciated: The eye is an indirect regulator of motion; it helps to correct deviations in walking and maintains the equilibrium. When a patient is suspected of incipient ataxy, it will often suffice to make him close his eyes when in the erect position to verify the diagnosis. In a few instances his body will oscillate, and if the malady is somewhat advanced he will be in danger of falling.

3. The "Stairs" symptom. One of the first and most constant symptoms of incipient locomotor ataxy is the difficulty with which the patient will descend stairs. If questioned closely on the subject he will say that at the very outset of his malady he was always afraid of falling when coming down stairs.

4. The manner in which a patient crosses his legs is often significant. In the normal state a man when performing that act lifts one leg simply to the height necessary to pass it over the other, whereas in the affection under consideration he lifts it much higher than necessary, describing a large segment of a circle.

5. Walking at the word of command. The patient seated is told to get up and walk instantly. After rising he will hesitate, as if he wanted to find his equilibrium before setting off. If, while in motion he is told to stop short, his body, obeying the impulsion, inclines forward as if about to salute, or, on the contrary, jerks himself backward in order to resist the impulsion forward.

6. The patient is asked to stand on one leg, at first with his eyes open, afterwards

closed. Although man is not made for this position, yet he can balance himself pretty firmly for a little time. The ataxic will experience a great deal of difficulty, and will instinctively call to aid his other foot so as not to fall. If his eyes are closed he will not be able to stand one instant, and if not held would fall heavily to the ground. Such are the symptoms of incipient locomotor ataxy; they will not be all present frequently, but they should be all sought for in order to avoid an error which might have grave consequences.—*Med. Press.*

TREATMENT OF CHOLERA.—In cholera times, when any one has diarrhœa, it should be arrested, by taking three times a day a powder consisting of fifteen grains subnitrate of bismuth and twelve grains of benzo-naphthol. If this does not suffice, take fifteen grains of salol before each meal. The diet should consist only of meat and eggs. The diarrhœa must absolutely be cured, as it is often the beginning of cholera and still curable. In England the importance of this preliminary diarrhœa is perfectly understood. In the principal cities during previous epidemics, medical inspectors have been appointed, each having under his orders a large number of medical students. Each of the latter visits 400 to 500 of the poor every day, in the morning, before the bread winners leave for their shops, and in the evening after their return. These measures restore public confidence, and the epidemic rapidly diminishes.

When the diarrhœa has become a true flux, and cholera is declared, it is necessary to give each day 90 to 105 minims of lactic acid dissolved in a pint and a half of sugared water. This should be taken, a claret-glass every two hours. For the vomiting, champagne, in dessertspoonfuls every hour, or cognac in coffeespoonfuls (℥ss). In the intervals the patient may relieve his thirst by taking a dessertspoonful of tea, coffee, or acid drinks, such as citric or hydrochloric acid lemonade; 15 grains of either acid to half a pint of sugared water. Do not give much liquid at one time, as it excites vomiting. Opiates are poisons, as the choleraic with inflamed kidneys cannot eliminate the toxines, and they hasten his death. If this treatment has not produced a sensible amelioration of the attack it is necessary to employ the intravenous injections of saline solution. Hayem's formula, that gave such good results in 1884, was:

℞.—Sodii chloridi..... gr. lxxv.
Sodii sulphat..... gr cl.
Aquæ destillat..... Oij.

M. S.—Heat to 38° C, and inject two quarts into a vein of the arm. This produces a veritable resurrection of the moribund patient, and the amelioration is often durable. In very grave cases alone, Hayem secured 30 per cent. of recoveries.

—Daremberg, in *La Méd. Moderne.*

CHOLERA.—Paul Lazarus, of Czernowitz, has forwarded a communication to one of the medical journals in which he states that the early presumptions of cholera, having its specific virus in the bowel, has been fully confirmed. This virus is taken into the system by the ingesta or infected hands coming in contact with the mouth.

To prevent the transmission of the cholera bacillus gaining admission to the body by means of the food, sterilizing has been resorted to, and strong disinfectants applied to the hands. Unconscious convection by the hands or atmosphere has not yet been decidedly agreed upon. Against the latter, however, it has been recommended to the attendants during the present cholera epidemic that they should wear veils of sublimate gauze, or some kind of respirator covered with sublimate gauze to insure protection against this supposed source of infection, at the same time urging the attendants to be strenuous in their attention in using disinfectants for the hands and mouth.

Disinfectants.—The Oberste Sanitätsrath have published an advice to the public for their general guidance. They find that the greater number of effectual disinfectants are dangerous agents to place in the hands of the public on account of their highly poisonous nature, such as sublimate of mercury, which they maintain should be excluded from general use.

They are satisfied that the spores will resist all chemicals under poisonous doses, but happily the comma bacillus is easier destroyed, and therefore amenable to a large number of innocuous disinfectants.

In the case of cholera patients, the clothes should be well washed with a 2 per cent. solution of lime, while the dejecta should be largely destroyed by the same agent. Caustic potash and the alkaline carbonates are not so good as the

lime compounds. Soaps containing potassium are therefore useless against the common bacillus. The mineral acids in strength of a half or fourth per cent. may also be used with advantage. A mixture of sulphur and carbolic acid are the most powerful disinfectants. There are a number of reputed drugs, such as creolin person, that are uncertain in their action. Lysol, however, above 1 per cent., seems to be as effectual as carbolic acid, and is more preferable for washing the hands, utensils, and floors, having less poisonous property than carbolic, and not so caustic. There are two other substances, solveol and solutol, which appear as efficient as lysol, although testimony and experience is not so wide in their favor.

—Vienna correspondence, *Med. Press.*

NOTE ON THE CHOLERA EPIDEMIC OF 1873 IN ROUEN (Olivier).—After describing the origin, and giving statistics of the epidemic, the author says:

I noted in several of my patients violent delirium, with tendency to get up and move about; some usually of a quiet disposition, became extremely violent. One symptom in a good number of observations is the remarkable thirst which led several of the sick to get up and steal the drink intended for other patients. Those who did this, got well, which supports Netter's opinion—that abundant aqueous drinks are indicated in the disease.

At the commencement of the epidemic Olivier prescribed the classical tea with brandy, but soon had to abandon this, as it proved particularly disagreeable to the patients, and put them on wine, syrup of gooseberry with seltzer water, ice, iced bouillon, etc., which was well tolerated and gave some sustenance. Bismuth was used for the diarrhœa.

In the algid stage, mustard baths rendered great service in the production of reaction, also frictions with tincture camphor (pure or carbolized). Reaction having taken place, coffee, quinine with opium, etc., were administered.

Convalescence was always long, in several cases there were ralapses, in others diffuse abscess. The urine was not regularly examined, but in cases in which it was, there was no albumen. Isolation was not carried out; the patients were placed in a common ward, and although there were other patients with chronic and weakening diseases, none were attacked. The physicians and nurses also escaped. The ward contained thirty beds, in nineteen of which were cholera patients. Olivier draws no inference from this, for or against isolation, but simply states it as a remarkable fact.

—*La Normandie Medicale.*

THE SEARCH FOR A CHOLERA PROPHYLACTIC.—Advices from Berlin state that physicians in that city are of opinion that the discovery of a prophylactic substance for inoculation against cholera is merely a matter of time and diligence, favored with a little luck. In support of their views they point out, first, that domestic animals never suffer from cholera, even if fed or subcutaneously inoculated with pure cultivations of the virus; secondly, about half of mankind are insusceptible to cholera, and those who have recovered from it are generally proof against it for four or five years. It is also reported that Dr. Haffkine, a Russian medical man, who has been assisting M. Pasteur for some years, has attempted some bold experiments with cholera virus. He inoculated himself, and afterwards other persons, with subcutaneous injections of attenuated cholera virus. The symptoms of uneasiness brought on by the inoculation, and which scarcely lasted twenty-four hours, were confined to a slight rise in temperature, and some other symptoms of fever, such as headache and dryness of the mouth without any intestinal disorder. All the symptoms disappeared within four days. Dr. Haffkine, after further experiments, comes to the conclusion that such inoculations may be carried out on man in all security, and that six days afterwards the human organism will be henceforth proof against cholera attacks.—*Hosp. Gaz.*

News and Miscellany.

THE Cholera number of THE TIMES AND REGISTER gave every idea in relation to the treatment that has been advocated recently by capable and experienced practitioners. Very little value is to be attributed to the opinions of men who never saw a case. The physicians of India have had the greatest opportunities for testing the remedies proposed, and the latest reports from this source are to be found in our cholera number.

In *The Practitioner* for August, 1892, is a very interesting paper by George Turner, describing the investigation of a localized outbreak of typhoid fever in Greenwich. He found that in the affected area there were 1,557 inhabitants; of whom 924 resided in houses where ice-cream had not been eaten; 232 in houses that had obtained ice-cream from shops, and 395 that had bought ices from a particular Italian vender. All of the typhoid cases, 61 in number, were among the Italian's patrons; the other two groups being unaffected. This Italian resided in a house where there was a case of typhoid; all the residents using the same privy.

The Committee on Organization of the Pan-American Medical Congress will issue the preliminary announcement of the Congress within a few weeks. This announcement will show that the organization has been perfected in almost every colony and country of the western hemisphere. The local medical societies in each of the constituent countries are made auxiliary to the Congress, which will be held in Washington, D. C., September 5, 6, 7, 8, 1893.

Dr. Reed, of Cincinnati, Secretary-General of the Congress and Chairman of the Committee on Organization, announces that after extended correspondence between himself and Dr. Maragliano, of Genoa, General-Secretary of the International Congress, the date of the Rome meeting has been finally and definitely set for September 24 of next year. This gives an interval of sixteen days between the Washington and the Rome meetings, during which time an easy trip can be made from the former to the latter city. It is possible that a steamer may be chartered direct from New York to Rome.

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S. Navy for the week ending September 10, 1892.

Stoughton, James, Assistant-Surgeon. Ordered to the "San Francisco."

Swatling, L. W., Assistant-Surgeon. Detached from the "San Francisco," and granted leave for one month.

Hibbett, C. T., Past Assistant Surgeon, detached from receiving ship Franklin and wait orders.

DR. BRUSH'S

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"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—Dr. N. F. Dahl's report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting, and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on Kumyss, when the improvement was rapid and permanent. Very truly yours,
Arch M. Campbell, M.D.

Farm and Laboratory,

Mt. Vernon, N. Y.

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PAGE

ORIGINAL ARTICLES:

ERICHSEN'S DISEASE. By S. V. Clevenger, M.D. - 369
REFLECTIONS UPON A "MIRROR." By Anna M. Fullerton, M.D. - - - - - - - - - - - - - - 370
THE WEIGHT OF THE BODY IN ITS RELATION TO THE PATHOLOGY AND TREATMENT OF CLUB-FOOT. By A. B. Judson, M.D. - - - - - - - - 372

EDITORIAL:

MEDICAL THEORIES, PAST AND PRESENT. *Bing* - 378

ANNOTATIONS:

Germ Catchers - - - - - - - - - - - - - - - 379
Annual Message of the President of the Medical Association of the State of Alabama - - - - - - 379
Sweating in the Profession - - - - - - - - - 380
Individual Duties - - - - - - - - - - - - 380

LETTERS TO THE EDITOR:

Syncope Following the Local Use of Cocaine. *Bing* 381
Chronic Diarrhœa and Muscular Pains. *Lenhart* - 381
Case of Sciatica Treated by Faradic Current. *Nolan* 382
A Singular Neurosis. - - - - - - - - - - - - 382

THE MEDICAL DIGEST:

"Rational Treatment of Typhoid Fever" (*Langdon*)—Exudative Laryngitis—A Substitute for Intubation (*Palmer*)—Prevention of Miscarriage (*Watson*)—Disease of the Right Iliac Fossa (*Reed*)—Cholera (*Parkin*)—Idiocy in English Women (*Med. Press*)—Congenital Chorea—Inability to Co-ordinate the Functions of the Limbs or Speech—Lack of Mentality—Linear Craniotomy (*Wyman*)—The Use of the Tonsils (*Whelpley*)—Malpractice Suits (*Med. Review*)—Skull Fractures (*Crile*)—Importance of Bacteria (*Conn*)—Use and Dosage of Lysol (*Vondergoltz*) - - - - - - 377, 383, 390–392

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—Noctural Incontinence of Urine in Children, and its Treatment by the Tincture of Rhus Radicans (*St. Phillipe*)—Prostitution in Paris in 1891 (*L'Union Médicale du Canada*)—Results Consecutive to Intra Nasal Cauterization (*Revue Internat. de Rhinologie, Laryngologie*)—Croup and Suffocative Laryngitis (*Bogot*)—Spirits of Turpentine (*Lyons Medicale*)—Professional Secrets in Court (*Med. Chir. Rev. & Therapeutique*)—The Anti emetic Action of Menthol (*Blanc*)—Formulary (*Bulletin Gen. de Therapeutique*)—Ichthyol Externally in Gynecology (*Freund*)—Relapse, False Relapse, and Recurrence of Scarlet Fever (*Janselme*)—Dangers of Iodoform Injections (*Drusman*)—Extended Perforation of the Cartilage of the Nose in Typhoid Fever (*Gellé*) - - - - - - - - 384–390

NEWS AND MISCELLANY - - - - - - - - - 393

MEDICAL CORPS, U. S. NAVY - - - - - - - 394

NOTES AND ITEMS - - - - - - - iv, vii, viii ix, xi

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Original Articles.

ERICHSEN'S DISEASE.

By S. V. CLEVENGER, M.D.

ALL through the history of the world combats have been carried on with varying results, sometimes one side was right, often both sides were wrong, or partly right and partly wrong.

Herbert Spencer inclines to the belief that "no man or measure is wholly right or wholly wrong." We are so apt to be warped and biased by personal considerations it is necessary to summon to the aid of clearer judgment more than ordinary philosophy.

If typhoid fever were to increase tenfold in New York City, and the Croton river pollution were demonstrably the cause, the Aldermanic boodlers, who enriched themselves by robbing the city treasury of funds intended to remedy the water supply defects, would unfailingly all be able to secure the services of one or two New Jersey mosquito physicians and surgeons, who by pseudo-experimentations, travesties of medical literature, buncombe, medical slang, illogical deductions, and other methods resorted to by medical politicians, who would report, for a consideration, that not only were the New York Aldermen the purest, the best, the most saintly municipal managers in the world, but that there was absolutely no such disease as typhoid fever; it was a "myth;" there was nothing in it. Patients who came into hospitals with this alleged disease, in reality were sufferers from syphilis and excesses generally. Anything, everything, you please, except typhoid, the "mythical" disease.

On the other hand, if large damages were obtainable against these holy municipal corporations for having acquired typhoid fever through any of its legal remissness, forthwith an astounding percentage of the community would claim to be suffering from typhoid fever.

So it has been in the matter of spinal concussion. Thousands have died from Erichsen's disease of the spine before the institution of railways. Derailments and collisions have increased the sufferers in our day, and as damages are often obtain-

able, it is natural that pretenders to such disorders should arise.

Such men as Erichsen, Bramwell, Spitzka, Ross, Gowers, Gross, Agnew, Knapp, Dana, Hughes conscientiously sifted the symptomatology, and everything that pertains to the disorder, and unanimously agree that such a complaint as Erichsen's disease of the spine exists.

Some obscure railway surgeons find it too difficult, owing to lack of means, brains, or disposition, to master the literature of the subject, and then depreciate the conclusions of acknowledged masters in surgery and neurology, from precisely the same motives that induces the "calamity" doctor to venture into court with ungrounded claims against a corporation. There is boodle in it for them.

A doctor of Galesburg, Ill., lifts his voice in protest against the suing of corporations under any pretext whatsoever, because he has been employed to swear against the claims of litigants. This same physician violated confidence enough to testify openly that he had, previous to a certain railway accident, treated a woman, the plaintiff, for syphilis. From the New Jersey marshes come approving echoes.

But the judicial physician will continue to investigate truthful and untruthful claims and record his opinion, regardless of the salaried corporation surgeon and the "calamity" doctor, who are often about equally ignorant and rapacious.

70 STATE STREET, CHICAGO.

REFLECTIONS UPON A "MIRROR."

BY ANNA M. FULLERTON, M.D.,
Physician in Charge of the Women's Hospital of Philadelphia.

A RECENT editorial in *The Medical Mirror* (August 1), entitled "Women and the Medical Profession," would lead us to believe that there is one spot upon our earth favored above all others—a fair Utopia—so far separated from the gaudy, struggling, self-seeking world, that its conceptions of life glow with the rosy tints of fancy.

Its men are manly beyond compare—disinterested, generous, just and noble in their bearing. In the words of the author of this article, they "believe in speaking the truth" (*in love?*) "though the heavens fall!" Were there any wrongs to redress in Utopia, they would, doubtless, like the knights of old, "go forth redressing human wrong." The fair women of Utopia are all of "a perfect type." They are "too refined, too delicate, too artistic, too loving and lovable, too full of heart and soul and a fondness for the milder, tenderer side of the world" to have suffered from the cold blasts of adversity which blow over remote and less happy regions. How much does the very existence of such natures imply of exemption from sorrow? From the work and care of ordinary life? The storm and stress which sweep in desolating fury over the plains upon which common mortals dwell? Misfortune, poverty, crime, disease and death have found no entrance here! The "mirror" of this happy land reflects a cloudless sky, a sun-bathed landscape, a care-free people:

> "If there be a paradise upon earth,
> It is here! it is here! it is here!"

But the range of a stationary "mirror" must, of necessity, be more limited than that of the wayside pool which reflects but its few feet of sky or overhanging branches. The fathomless depths of space are unknown to it, as also is the circuit of the stars. Alas! beyond Utopia—aye, even within sight of its pleasant home—is a region into which evil has entered, the real, not the surface-world, which "sins and weeps and curses and suffers, and sends up its long cry to God."

The mirrors of this region reflect the pawn-shop, the drink-shop, the hospital, the dungeon, the grave-yard. Here are found cold, cruelty, fever, famine, ugliness, loneliness, pain.

The men of a household, no longer able to serve as natural protectors to clinging womanhood or helpless childhood—weak women, through the instincts of self-preservation, or loyal wifehood or motherhood, struggling to their feet to fight the battle of life alone for themselves or for those dependent upon them! In one State of our Union there are over two hundred and forty thousand women supporting their husbands and families. Now ask whether these women are "so constituted physically as to be equal to these demands." Necessity knows no law. "Dislocated," "unnatural," "unwomanly," lacking in ethical sense, are these women?

The words sound like hollow mockery, or echoes among fossil-rocks, in the face of the world's needs.

In the Presidency of Bombay, there are, to this day, prize books distributed to deserving girls in the schools aided by Government, which contain the following creed for the conduct of women:

"If the husband of a virtuous woman be ugly, of good or bad disposition, diseased, fiendish, irascible, a drunkard, old, stupid, blind, deaf, hot-tempered, poor, extremely covetous, a slanderer, cowardly, perfidious, and immoral, nevertheless she ought to worship him as a *god*, with mind, speech, and person.

"The wife who gives an angry answer to her husband will become a village pariah-dog; she will also become a female jackal, and live in an uninhabited desert. The woman who speaks disrespectfully to her husband will be dumb in the next incarnation. The woman who hates her husband's relations, will become, from birth to birth, a muskrat, living in ordure and filth."

Thus does the East endeavor to trample upon the aspirations of its women, and to prevent their becoming "dislocated," "unnatural," "unwomanly."

In an old, black-letter work of A.D. 1632, called "The Lawes Resolution of Women's Rights, or The Lawes Provision for Women," there is a chapter entitled "The Baron (*i.e.*, husband) may beate his Wife." In the opening chapter is the following sentence: "Justice Brooke affirmeth plainly that, if a man beat an outlaw, a traitor, a Pagan, his villein, or his wife, it is dispunishable, because by Law Common, these persons can have no action."

The author (who was evidently a gentleman in advance of his times) quaintly adds: "God send, Gentlewomen, better sport or better Companie." (T. W. Higginson.)

The women of civilized countries to-day, seek "better sport and better companie." Seeing, "as in a glass darkly," the possibilities of their future, they endeavor to shake themselves free from their shackles—the "vast, superincumbent weight of a cosmic tradition." They question why a woman, endowed with intellectual powers, who enters the ranks of bread-winners, should spend her days and nights in eking out a bare existence at distasteful and unremunerative labor when, like Minerva, she may share with Apollo the honor of presiding over arts and sciences.

And what of wifehood and motherhood, when women no longer grovel upon the ground and sell their souls for bread? The woman who marries, will marry the man she can love and honor—whose every wish will be to her the dearest law—in whose companionship she can drink her deepest draughts of happiness. The child she bears will not be the "chance child" of an enforced motherhood, bearing upon mind and body the impress of physical or mental pollution. The child of hope, the child of joy, it will be to its parents a God-given boon. Thus "springs the crowning race of humankind."

As to the fitness of women for the study of medicine, we, too, must speak the truth, "though the heavens fall!" It has ever appeared to us that the art of healing belonged essentially to those in whom the mother instinct was strong—to those capable of persistent endeavor, unwearied patience, heroic self-forgetfulness. As a means to an end, a woman finds no horrors in the dissecting-room. A reverent study of the mysteries of nature, debases no noble mind. "We speak of that we know; we testify of that we have seen." The joy of intelligent ministry may be much to a man, but it is more to a woman, because of her mother-heart.

Woman may work blunderingly for many years, aye, perhaps for centuries, for "she will still work at disadvantage; she will still find herself surrounded nearer or farther off, by an atmosphere of distrust and disparagement. These are obstacles enough, under all circumstances, to the rearing of first-class genius. It certainly is not easy for it to raise itself when it has the weight of the globe on its shoulders." It is the highest office of the heroic spirit—

"To bind up the broken-hearted;
To proclaim liberty to the captives;
To comfort all that mourn."

To give unto them—

"Beauty for ashes;
The Oil of Joy for Mourning;
The Garment of Praise for the spirit of heaviness."

Could not our editor place his "mirror" where it might show to some advantage woman's share in the physical, moral, and mental redemption of the race? Had he not heard rumors of the dark, out-lying districts wherein they labor, we should hesitate to thus rudely disturb his dream of peace.

THE WEIGHT OF THE BODY IN ITS RELATION TO THE PATHOLOGY AND TREATMENT OF CLUB-FOOT.[1]

By A. B. JUDSON, M.D.,
Orthopædic Surgeon to the Out-Patient Department of the New York Hospital.

I DESIRE to present a few thoughts of an extremely practical kind, relating to the treatment of talipes equino-varus. Beginning with congenital club-foot, it is well to bear in mind that there is a vast difference between a child recumbent and a child walking. While the child is in arms the case is yet free from the complications and difficulties caused by the falling of the weight of the body on the deformed foot. These twelve months, more or less, are the most important year in the history of the case, because in this period the foot is to be changed so that when the child begins to walk, the use of a slight walking brace, exerting only a moderate degree of force, will convert the weight of the body from a deforming to a correcting agent. During these months of recumbency, with the weight of the body out of the way, with all the tissues soft and formative, and the foot more than doubling in size with the growth of the child, there is every reason to expect to succeed in what we undertake, provided time enough be given to the case, and faithful attention to the details.

The apparatus which I have conveniently used to effect this reduction, before the child learns to stand, is a simple retentive splint which acts as a lever, making pressure on the outer side of the foot and ankle, at A, in Figs. 1 to 4, inclusive, and counter-pressure at two points, one on the inner side of the leg, at B, and the other at the inner border of the foot, at C. It is advisable to keep in mind that this simple instrument is a lever, because, if we know that we are using a lever, with its three well-defined points of pressure, we can make the apparatus more efficient than if we view it in a more general way, as an apparatus for giving a better shape to the foot.

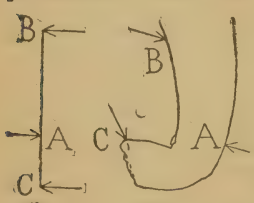

Fig. 1. Fig. 2.

[1] Read before the American Orthopædic Association, New York, September 21, 1892.

I use a little brace made of sheet brass, doing the work with a few simple tools. An advantage of doing the work one's self is that there is no room for doubt as to where the blame lies, if the apparatus does not work well. Two disks, B and C, Figs. 3 and 4, are riveted to a shank, D, and thus is formed that part of the brace which applies the two points of counter-pressure, while, on the other hand, the point of pressure is brought into action by a third disk, or shield, A, which is drawn tightly against the outer side of the foot and ankle, and held in place by a strip of adhesive plaster, E, which includes the limb and the piece which connects the two disks, B and C. The disks are lined with two or three thicknesses of blanket, easily renewed, when necessary, with a needle and thread. These braces are so cheap and easily knocked together that it is nothing to apply new and larger ones, using heavier material for the shank as the child grows. In general, three sizes will be enough, the shanks being 12 gauge, ⅜ inch wide; 14 gauge, ½ inch wide, and 16 gauge, ⅝ inch wide. The disks are conveniently made from 22 gauge, 1¼ inch wide. The rivets are copper belt rivets No. 13. A lip turned on the edges of the disks, with the flat pliers, gives stiffness to the thin brass and protects the skin from the rough edge. If more easily obtained tin disks, light bars of iron or steel and ordinary iron rivets, would doubtless answer.

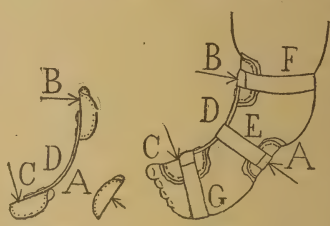

Fig. 3. Fig. 4.

The brace is applied with three strips of adhesive plaster. The upper and lower pieces, F and G, Fig. 4, are simply to keep the apparatus in place, which they do effectively if ordinary gum plaster is used, while, by drawing the middle strip, E, tightly over the shield and straightening the brace from time to time, the deformity is gradually and gently reduced. At each re-application the brace is made a little straighter than the foot at that stage. This may readily be done by the hands, and then the adhesive strip is to be tightened over the shield, till the shape of the foot agrees with that of the brace. After a few days the brace is to

be made still straighter, and again re-applied, and made tight till another point of improvement is gained. The brace is applied very crooked at the beginning of treatment, as in Figs. 3 and 4, and is straightened from time to time, and a longer brace applied as the deformity is reduced and the patient grows. It should be removed every week, or two weeks, and an interval of a few days allowed for freedom from the brace, when the mother is advised to manipulate the foot constantly, using as much force as she will in the direction of symmetry. Manipulating the foot during these intervals is of great importance, as cases have occurred in which varus and equinus have been entirely overcome by the mother's hand alone.

By this simple and prosy treatment, carried out systematically and without haste, or violence, or pain, the foot, unless it is a frightful exception, may, with certainty, be changed from varus to valgus. At the same time, the tendo-Achillis is lengthened till the position of the foot is near the norme, or at right angles with the leg, as the result of manipulation and giving the brace from time to time a partly antero-posterior action. Figs. 3 and 4 show approximately the shape of the brace at the beginning of treatment, Figs. 5 and 6 when the varus is reduced, and Figs. 7 and 8 when valgus has taken the place of varus. The foot, in this latter stage, may not hold itself valgus, when left to itself, but, with almost no force, and with one finger, it may be pushed into valgus; and in this condition it must be when the child begins to walk, and then another stage of treatment begins.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

When the patient begins to walk we have a new difficulty. It is now seen that the weight of the body, falling on the tender and ill-formed foot, will, if not properly directed, defeat all our efforts. Let us, for a moment, consider the mechanical environment of the human foot. In the first place, the corporal weight, which the quadruped distributes among four pedal extremities, falls in man upon two. Again, the small floor area covered by the feet and their slight structure, seem unequal to the task of supporting the towering frame above them, which in some cases almost resembles a pyramid resting on its apex. And when we observe the effect of active locomotion we see weight and momentum combine in an apparent effort to crush and destroy. And, furthermore, when extraneous weights are added and the strain is prolonged, as in the case of the burden-bearer among savage tribes, or the infantry soldier on a forced march, the endurance of the foot excites wonder. It is not strange that the feet are subject to ailments: to blisters, bunions, ingrowing nails, hallux valgus, hammer toes, loss of the arch, weak ankles, painful affections of the metatarsus, perforating ulcers, osteitis, and the varieties of talipes. The wonder is that they are not permanently disabled soon after walking is begun, and certainly when the adipose tissue of the body takes on the development which accompanies age and good living. The gourmand, Savarin, said that, among the works of creation, the design of the human foot was a conspicuous failure. Considering the immense weight carried by the foot, it is evident, however, that only the most perfect natural adaptation of mechanics has enabled this insignificant member to perform its superlative functions, and that great caution should attend all procedures having for their object its artificial re-construction.

It is also sufficiently evident that the correction of club-foot by mechanical means, while the patient continues walking, is a problem beset with difficulty. We have, however, a luminous ray of hope and encouragement in the observation that, in talipes varus, there is an important boundary line between deformity and the norme. If the foot is held in some way, now to be considered, on the right side of this boundary line, each step forces it in the direction of valgus, and the increasing weight of the child is a powerful force acting in the right direction, or away from varus, so long as the foot is held, though never so little, looking toward symmetry. It may be said that

the child stamps his foot straight. If, on the other hand, the foot is held, or allowed to fall, on the wrong side of this line, though never so little, each foot-step is a blow, driving the foot more and more into the varous position.

This point may be illustrated by the hand placed with its ulnar border on the table. If considerable pressure be made on the table, by the hand so placed, it becomes evident that there is a boundary line between pronation and supination. If the hand is pronated, never so little, additional pressure will force the palm into pronation, which represents valgus in the foot, and if the hand be supinated in the slightest degree, additional pressure will force the palm into complete supination, which represents varus in the foot.

By the application of this idea, the weight of the body may be made a beneficent, instead of a harmful, factor in the progress of a case of talipes varus, and the walking-brace should be constructed with this in view. It should be made of steel, and by an instrument-maker. One of its functions is to act as a lever, but the leverage is applied not chiefly to overcome the deformity by direct force, as in

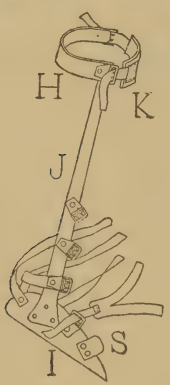

Fig. 9.

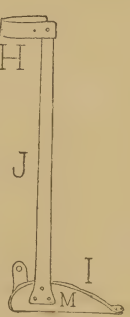

Fig. 10.

the retentive brace above described, but to hold the foot on the right side of the boundary line above mentioned, so that the weight of the body may straighten the foot, or overcome the varus in a direct and forcible manner, without general or local inconvenience.

The walking-brace consists, as usual, of leg-band, H, Figs. 9 and 10, foot-piece, I, and upright, J, riveted firmly together. A movable joint at the ankle should be discarded, as it undermines the lever by introducing an element of instability, and, in this brace, serves no good purpose. Mild steel alone should be used, to facilitate alterations in shape, as point after point of improvement is gained, and to make easy the shifting of buckles and straps, as may be required, all of which may be done by the use of a few simple tools. The upright is to be on the inner side of the leg, as in Fig. 14. The upper part of the brace makes counter-pressure on

Fig. 11.

Fig. 12.

the inner side of the leg, but it has another important function, in previously neglected cases, which is secured by the steel band passing across the back of the leg, to which are fastened two buckles for the attachment of a piece of webbing, K, in Fig. 9, which passes across the front of the leg. The steel band should make no pressure on the limb, as its use is simply to furnish attachment to the buckles. A piece of webbing, spanning the front of the leg in this manner, and carrying a pad, performs an important service in cases like the one shown in Fig. 12, in which, from previous neglect, the varus has not been reduced before walking begins. It transfers a part of the weight of the body from the anterior part of the sole of the foot, where it interferes with the correction of the varus, to the upper part of the anterior surface of the leg, where it is powerless to interfere with the treatment. That the weight-pressure thus transferred is considerable, is shown by the callus and bursa which appear where the padded strap crosses the leg near the tubercle of the tibia. This mechanical effect is similar to that of the brace, shown in Fig. 11, used in the treatment of paralysis of the muscles of the calf, resulting in talipes calcaneus.

The upper part of the brace is also to be considered in another light, as follows: In previously neglected cases it is well to incline the upright 15° or 20°, or more, backward from the vertical of the foot-piece, as is shown in Fig. 9. Although correction of the equinus is postponed by this inclination of the upright, we are thus enabled to apply a better leverage against the varus, and when the varus is reduced, and the time arrives when the equinus is to be corrected, this backward inclination of the upright is to be lessened from time to time, till the vertical is reached, as in Fig. 10, or, till the upright has an inclination forward, allowing the corporal weight to fall more and more on the anterior part of the sole of the foot, and gradually lengthen the tendo-Achilles. The vertical upright, Fig. 10, is to be applied at once to patients in whom the deformity has been corrected before walking begins.

We will now pass to a consideration of the other end of the brace—the foot-piece—which is to be made of sheet steel, ranging from 18 gauge, for a child learning to walk, to 13 gauge for an adult. It has the usual tread, L, Fig. 13, and riser, M, Fig. 10. The heel cup is formed by a piece of webbing, N, Fig. 13, passing behind the heel, from the lower part of the upright to a spur, O, Fig. 13, which projects upward from the back part of the outer border of the tread.

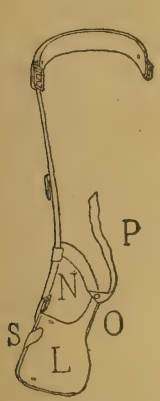

Fig. 13.

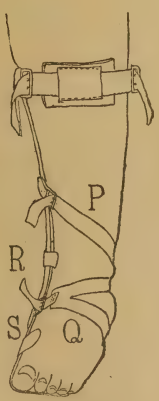

Fig. 14.

Viewing the apparatus again as a lever, for the forcible reduction of varus, in a previously neglected case, counter-pressure is made along the inner border of the foot, and on the upper part of the inner side of the leg, while pressure is made by one strap, or more than one, riveted and buckled to the foot-piece and the upright. But one strap is shown, P, in Figs. 13 and 14. This will be sufficient in the case of a child whose varus has been corrected before walking begins, but in a previously neglected patient, in whom the varus has yet to be reduced while the child is active on his feet, two, three, or more straps may be added, as shown in Fig. 9, partly encircling the foot, ankle and leg, the positions of the buckels and the straps being where they will assist most efficiently in opposing the varus, and holding the foot in the best position to receive the weight of the body. These parts of the apparatus may be shifted many times, with advantage, in the treatment of a given case of unusual difficulty, and, in addition, a most efficient agent for applying continuous pressure is found in a strip of adhesive plaster, Q, Fig. 14, sewed to a piece of webbing, R, the plaster partly encircling the foot and ankle, with a single tail, or two tails, as may be required, and the webbing being drawn tightly and buckled to the inner side of the riser. This device does more than simply to increase the amount of pressure; it also keeps the heel down on the tread of the foot-piece and, more important still, it gives the foot a rotation outward, and thus directs the sole of the foot forcibly toward the ground, in the best position for making the weight of the body a corrective instead of a deforming force. The riser of the foot-piece may also, in previously neglected and difficult cases, carry an ear, S, Figs. 9, 13, and 14, made of sheet brass, which is to be bent downward over the first metatarso-phalangeal joint, to prevent the inner border of the foot from overriding the edge of the riser. The foot-piece is to be lined with adhesive plaster, in several thicknesses, if necessary, to prevent rust, and with a piece of leather fastened to the tread and spur with copper rivets, as shown in Fig 10. In practice the details demand as much attention as the principles of treatment. The brace is to be applied over the stocking, the strap, R, passing through a hole cut in the stocking, and is hidden by the patient's trousers and shoe.

We will now consider the upright of the brace. It is a flat, tapering bar of mild steel and, when first applied to a previously neglected case, such as is shown in Fig. 12, should have a curve resembling

that of the varous foot. The bar, though sharply curved, as is Fig. 13, should, however, be somewhat straighter than the foot, when the latter is forced manually into its best position. The multiple straps, shown in Fig. 9, should then be buckled and tightened daily till the continuous leverage has partly reduced the varus. The upright bar should then be somewhat

Fig. 15.

Fig. 16.

straightened, and another point of improvement be gained, the patient in the meantime following his ordinary pursuits without interruption. In due time the upright bar, and the foot itself, will both be straight, as seen in Figs. 15 and 16, in other words, the varus will be reduced. The upright should then be bent, from time to time, in the direction of valgus, as seen in Fig. 17, and the persistent and

Fig. 17.

Fig. 18.

gradual effort resumed until the foot has been pushed, or pulled, or pried, over the boundary line, into the domain of valgus, as seen in Fig. 18. These efforts would not be necessary if the varus had been converted into valgus before the child had learned to stand. In very badly neglected cases the interference of the weight of the body with the treatment may be prevented by the recumbent position, or the use of a high sole on the well foot and the ischiatic or axillary crutch, until the varus has been materially reduced. In all cases, when the child is old enough to be docile, domestic instruction and drill in eversion of the foot, and in the proper management of the foot in locomotion, should be a part of the education.

As soon as the foot has reached the valgous shape, whether it be at the moment of learning to walk, or only after prolonged effort, in a neglected case, a curious effect will be observed. It will be seen that the

Fig. 19.

Fig. 20.

outer border of the tread of the foot-piece is raised from the ground, as seen in Figs. 19 and 20, and that we have secured, in a convenient manner, the effect which is sometimes sought by building up the outer border of the sole of the patient's shoe. This is a welcome and powerful ally in our attempts to hold the foot in a favorable relation with the weight of the body and the ground.

The walking-brace has been above described as though its chief use were to reduce varus which has become more or less confirmed by the habit of walking on the outer border of the foot. Strictly speaking, such cases should never occur. They are, however, too common and always indicate that the child has been neglected from the period of recumbent infancy, when deformity of this kind is the most easily overcome. If the varus were

always corrected before the child learns to stand, then the only use of the walking-brace would be, as shown in Figs. 19 and 20, to gently hold the foot in valgus, so that the weight of the body shall be sufficient to lead the child to grow up with a foot practically normal. As such a child outgrows the brace, a larger one is to be made, and, when three or four years old, the foot will, without the help of the brace, strike the ground so fairly that, for two or three years, all treatment may be suspended. The patient is to be observed from time to time, however, and, as the foot grows in its original inclination to varus, it will, after the lapse of two or three more years, have to be kept in proper position, under the rapidly increasing weight of the body, by a walking-brace adapted to its needs, for another period of two or three years. When the foot is full-grown it will be shapely in appearance and practically perfect in its ability to perform all the duty of a foot congenitally normal.

Although congenital club-foot has been chiefly kept in mind in the above pages, the views expressed in regard to the influence of the weight of the body are applicable also to talipes varus of paralytic origin. In this affection, at an early stage, and before the foot has lost its flexibility, a simple walking-brace is needed, as in Figs. 19 and 20, to properly direct the action of the weight of the body on the paralyzed foot. At a later period, if this measure has been neglected, and the foot has been allowed to become varous, and more or less inflexible, the case will require more attention and probably prolonged effort, with multiple straps and adhesive plaster, to carry the foot across the line between deformity and the norme, to the position in which the weight of the body shall be a correcting and not a deforming force.

"Rational Treatment of Typhoid Fever."—In this connection I would repeat what I have already said of the bichloride salt, viz.: that it is, "in one sense, the most certain antipyretic known to me." By this I do not mean that it is a suitable remedy to quickly reduce a dangerous temperature, but that in that indefinite class of fevers variously diagnosed as remittent, or as typho malarial and conforming to no typical form, I have repeatedly seen the temperature steadily diminish from day to day, without reaccess of the fever, and with corresponding improvement in the collateral symptoms, under the use of the bichloride salt in $\frac{1}{24}$ to $\frac{1}{12}$ gr. doses, three to six times a day. "I believe that it exerts the same controlling influence in many cases of typhoid, and may even shorten the natural course of the disease without risk to the patient."

How this action is brought about, unless by the limitation of ptomaine formation in the intestine, I am unable to surmise.

To summarize what I would take the liberty of calling the "rational" treatment of typhoid fever: it should combine the good features of the anti-mycotic, the antipyretic, and the expectant or symptomatic plans.

1. It should sustain the patient, by ventilation, quiet, and careful nursing; a diet of liquids only, and containing a minimum of nitrogenous principles, *e.g.*, milk, boiled to prevent possible danger of adding infection to infection, and slightly thickened with well-baked wheat flour, to prevent formation of large curds in alimentary canal, as well as to add to its dietetic value. Broths (not beef tea), malt preparations, alcohol, pure water in abundance, fruit juices, clam juice, koumiss, and buttermilk when they agree.

2. Attempt to remove or abate the cause so far as practicable by the administration of remedies which tend to favor intestinal anti zymosis, preferably the bichloride mercury in $\frac{1}{16}$ gr. doses, three or four times a day.

3. Symptomatic treatment as indicated in the individual case.

4. Promote removal of products of tissue oxidation, "the ashes of the fire," by attention to skin, kidneys, bowels and lungs.

5. Secure prophylaxis by boiling all soiled linen and bedding, and disinfecting stools and urine with corrosive sublimate, or sulphate of iron solutions.

In my opinion, the plan of treatment which best meets all the indications mentioned, recognizes the modern advances in the pathological, bacteriological, and chemical sciences, and conforms to the requirements of a rational therapy.

—T. W. Langdon, in *Jour. A. M. A.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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MEDICAL THEORIES, PAST AND PRESENT.

SINCE the appearance of man on the earth disease has been more or less prevalent, and the natural tendency to trace effect to cause led to the desire for the removal of the cause, in order that a normal state might be again enjoyed. Because observation and judgment are essential to this end, and since neither could be exercised without the participation of the reasoning faculty, it follows that the ideas suggested by the former, when condensed and correlated by the latter, would give a mental picture of the disordered condition. These speculations were called a theory. As mankind dispersed over the earth, and more individuals gave their attention to the subject, each would have theories of his own; after a time, by the interchange of ideas, a certain amount of agreement would be reached, a new theory would be formulated, and prevail to a greater or less extent. Then, some original investigator would point out fallacies, and, if successful in gaining adherents, would launch a new theory, which lasted until some one else played the rôle of iconoclast.

Theories in medicine have appeared in the past (and doubtless will in the future) to move in cycles, or periods, after prevailing for a time, have been relegated to oblivion, then resurrected, either in their old form, or with modifications. As the human mind has always pursued the same lines of thought, it is not surprising to find that many of what we are accustomed to look upon as modern ideas have been anticipated and partly worked out by our predecessors of long ago. For instance, the most modern belief, the germ theory, was advanced very early in the history of medicine (Flint), but was ridiculed and neglected, until revived by Linnaeus, and advocated by Pasteur, Koch and others of our own times.

That among the ancients there existed theories of medicine is evidenced by the fact that among the Egyptains the physician was controlled by certain regulations for the care of the sick. If he practised within these he might be quite unconcerned as to the result, but if he ventured to indulge his own ideas, he was answerable for non-success at the cost of his head. Herodotus states also that every physician was confined to the practice of a specialty. Contemporary nations probably derived their medical ideas from the same source. The medical and sanitary code of Moses was, of course, but the promulgation of the knowledge he obtained during his sojourn among the Egyptians.

We have only to go over a list of the names of prominent physicians from the Dark Ages to the present time, to find that each represents a separate theory of disease, and as every one of these had his following we have just so many schools of medicine started for the dissemination of the nations, and practice of the same. From the flotsam and jetsam of these discarded theories there has, by a process of elimination, been built up the science of medicine as we have it to-day. The more recent theories have shared the same pruning operation; for example,

hydropathy, venesection, the etiology of fevers, of insanity, and other diseases.

As the collateral sciences of hygiene and dietetics have advanced many old errors have been eliminated. In place of confined apartments, without regard to the prevention of contagion or infection, by means of ventilation, isolation and disinfection, these means are now availed of to the greatest possible extent.

Instead of epidemics being regarded as evidences of the wrath of the God we know them to be the result, in great measure, of violation or ignorance of the laws of health, and can accordingly, to some extent, control them. Since the microscope has taken a front rank, both as an instrument of precision and an important means of diagnosis, we are beginning to arrive at an understanding of the primal causes of disease, and are better prepared to combat them in their incipiency.

From the superstitions of the "Dark Ages" to the demonstrations of to-day is a great stride forward, but those feeble and occasional gleams of actual knowledge obtained from the discarded theories have been the factors in the evolution of the brilliant light of medical science as it is now.

Theories are as abundant to-day as ever, and reactions as certain to occur. We need only mention Brown-Séquard's "process of rejuvenation" by means of testicular elixir, or juice; Bergeon's carbonic acid injections, and the different inhalations used in pulmonary tuberculosis, and last, the widely heralded lymph (Koch's "means of emancipation" from the disease) (eternally in some cases), which has already begun to encounter the assaults of the doubters, and whose ultimate fate hangs in the balance. The antiseptics, too, which have been pushed to an unlimited extent, are being questioned by some who believe that a substance strong enough, and sufficiently far-reaching in its effects to kill the germs of disease, may also form sufficiently strong to set up an irritation of the healthy tissues and cells, which latter state may become as bad as the former.

The "extravagancies" of the germ theory and its allied antiseptic treatment will yet be pruned down, and after a period of further investigation may arrive to a more glorious and more rational use in the hands of the physicians of the future.

E. W. Bing.

Annotations.

GERM-CATCHERS.

In our last volume Dr. Dixon told our readers how he found the bacilli of tuberculosis in the dirt scraped from a woman's trailing skirt. We are fully aware that if the ladies consider trails in fashion, trails they will wear, even at the risk of bringing back to their homes the germs of all known infections. Of course, they will be very much grieved if the children die of diphtheria, scarlatina or measles, but no self-respecting woman will wear a short skirt in the street when fashion prescribes a trail. We men may rail and rant about it, but what woman wouldn't face all the ills in Pandora's box rather than be called a "dowdy?"

We have received a bound copy of the Annual Message of the President of the Medical Association of the State of Alabama, for 1892, Dr. B. J. Baldwin, of Montgomery. From this paper we glean the following items of interest in regard to our Alabama brethren: In 1891 her health was looked after by 1,745 regular physicians, in addition to whom there were 58 illegal practitioners, 18 homœos, and 19 eclectics. Since 1878 there wer 507 graduates of Southern colleges who came before the examining boards, with 66 rejections, or 13.01 per cent. Of the Western colleges, 36 candidates appeared, with 7 rejections, or 19.40 per cent; while often 74 representatives of Northern colleges, 7, or 9.45 per cent. were rejected. Of 7 non-graduates, the rejections were 2, or 28.5 (misprinted as 2 85 in the report); while 5 graduates of foreign colleges all passed. Candidates before the State Board evidently faced a more trying ordeal, as out of 44 candidates the failures reached over 70 per cent.; and in the case of non-graduates, 85.18 per cent.

SWEATING IN THE PROFESSION.

A VERY significant reflection on the condition of the medical profession in Great Britain is found in the following article from the *Hospital Gazette* on "Medical Aid Associations:"

"At first sight, one is disposed to take a rather severe view of medical men who sell their services to Medical Aid Associations, but there is evidently something to be said on the other side. Witness the following remarks culled from a letter published by a contemporary on this subject: 'The man who graduated at the very bottom of his class, buys a practice soon afterwards, and pays his old classmate, the first man of his year, perhaps, £125 a year to do work for which the patients pay £1,000 a year. For £2,000, suppose he buys £1,500 a year net, puts two thirds of the work and all the drudgery on his assistant, knowing that the work will be better done than if done by himself, and thus besides the opportunity of earning £500 a year by his own work, gets 50 per cent. on his capital. The assistant feels that he is badly treated, and yet cannot resist; but the patients, learning that they pay £1,000, for what can be had for £125, form a Medical Association, give the former assistant a salary of, say, £250, and thus, though obtaining exactly the same services, save £600 or £700 a year. The late principal is, of course, vexed at losing a large part of his income, and calls his rival hard names, a 'degrader of the profession,' a 'public sinner,' and so on, and forgetting that he himself had been a party to a contract in which a qualified man undertook certain work for £125 a year, denounces as low one by which twice that sum is earned for the same work. He has, however, only himself to blame, for had he been content with 20 or 25 per cent. interest on his capital, his assistant would have had such a salary as would make him refuse the Association's offer. It is hardly necessary to say that I am not referring to any particular case, but illustrating by an example the method of dealing with assistants which is, I believe, largely responsible for the formation of the societies mentioned. As to Mr. Pike's plan of forming a strong trade union among medical men, by which the action of the House of Commons might be treated with contempt, I may say that popular feeling would be opposed to such a union among men who have comfortable incomes, that it would be called by the odious name of a ring, and if it gave any trouble, would be declared illegal. Finally, as to the impression upon the mind of the public, I may point out that the public know the value of medical services from the salaries offered to qualified men by advertisements in the press. When they see that one medical man values another at £50 a year and food, etc., their opinion cannot be lowered by seeing a third take a much larger salary from a lay association.' Sweating is detestable inside or outside of the profession, but if one must be 'sweated,' it is easy to understand that the victim would prefer to undergo the operation at £250 per annum in a comparatively independent position, than to do so as an assistant at £50 or £100 'all found.'"

INDIVIDUAL DUTIES.

WHEN the community is threatened with grave danger, such as would result from an invasion by cholera, every citizen has certain duties to fulfill. The recognition of these personal obligations constitutes a striking difference between our own people and the masses in all European countries. There, in all great emergencies, the Government is the source of activity to which the public looks for help. Here, the public helps itself; the Government is altogether secondary, and is only called upon in rare emergencies, or when individual exertion must be replaced by the organized and trained efforts of a number working as a harmonious whole, as in the case of the fire department.

But, in the present emergency, there is need for individual action to aid the organized efforts of the Board of Health, and this can best be done by adopting a suggestion of the Health Officer, Major Veale, and forming block sanatory associations.

When the Health Department, with a force calculated for ordinary duties, is called upon suddenly to enlarge the work to the extent required by an impending epidemic, some difficulty is sure to be experienced. New men must be secured, and require time to be inducted into their new duties, the extent and limitations of which are not known intuitively, but require a little experience. Nuisances, real

or imaginary, are reported in such numbers that some delay is inevitable in dealing with them. And yet, delay is often dangerous in itself, and also in its effect on the minds of those who do not reflect that a city of a million inhabitants cannot be covered as quickly as a small town. But just here lies the great value of Major Veale's suggestion, that it applies to every section of the great city the minute personal supervision that can be given to the town—in fact, it divides the city into a multitude of little towns.

The plan is this: Let the citizens of each block meet and form a sanatory association that will look after the needs of its own territory. Such a body can see that the street cleaning, garbage and ash collection are done in accordance with the law; the members can make a house to house inspection in far less time than the regular officials could possibly do it, and report to the latter any house, cellar, alley, yard, cesspool, gutter or vacant lot, whose condition requires attention. Moreover, they can do the work that a whole army of inspectors could hardly accomplish, in seeing that all such places are not only cleaned, but kept clean.

Besides this, the moral influence of such a body in upholding the health authorities in their labors would be of the greatest value. Some of the illiterate classes are disposed to look on a sanatory inspection as an insult, and occasionally the rowdy element renders the inspector's duty very unpleasant, whereas, a committee of the leading residents of the block, accompanying the city official in his efforts to ward off disease, by giving the benefit of his skilled advice, puts the whole matter on a different basis.

Should we have a development of cholera here, such an organization would doubtless be formed at once, but it is surely wiser not to wait until the enemy is within our defenses. All the studies recently made of cholera, go to confirm the old adage that "an ounce of prevention is worth a pound of cure."

Modern science has added scarcely anything to our means of treating cholera; it has proved most conclusively, over and over again, that we can prevent this and all other epidemic diseases by cleanliness. Philadelphia is a clean city, comparatively speaking. She could scarcely suffer from such calamitous visitations as fell upon Marseilles, Toulon, and Hamburg. Still, there is much that should be done in the dark corners; many a nuisance that would be abated at once if the finger of public shame was pointed at the owner of the premises. Let it be known that a committee of the neighbors is about to pay an official visit, and there would be a most wholesome cleaning up of the neglected spots, where disease germs might otherwise be nourished.

Letters to the Editor.

SYNCOPE FOLLOWING THE LOCAL USE OF COCAINE.

A man came to have a piece of emery removed from the eye. As sufficient steadiness could not be obtained, a weak solution of cocaine was used, in small quantity. The speck was easily removed from the cornea, but left a slight stain; a little more of the solution was used. Suddenly the patient said, "I don't want any more of that gas," became pallid, cyanosed, unconscious and limp, with stentorous breathing. He was immediately stretched out on the floor, and almost at once revived and sat up. He said his only sensation was a sense of sinking in the stomach, but had no inclination to vomit. The return to consciousness was accompanied by a rather profuse sweat. Was this due to the cocaine, or to an ordinary fainting attack?

E. W. Bing.

[A number of cases have been reported in which corresponding symptoms followed the local application of cocaine. Two occurred in my own practice. In both, the patients were persons who could be expected to faint on any suitable occasion, and my impression is that this is true in all, or nearly all, the reported cases.

W. F. W.]

CHRONIC DIARRHŒA AND MUSCULAR PAINS.

I AM a reader of your valuable journal, The Times and Register. I like your special numbers more each time they are issued. When bound in library form they will be invaluable for reference.

I have a patient, whose condition I will relate, and I would be pleased to have your advice concerning him.

Male, age sixty-six years; always enjoyed good health; height five feet eight and one-half inches; weight one hundred and seventy-six pounds. About three years ago he began suffering from muscular rheumatism of his trunk and upper extremities. He has a chronic diarrhœa at times; says he has had it since he was in the army service. Medicine has not benefited him. He does no hard work; has a good appetite and sleeps well. I thought if he could drink some water from the Bedford Mineral Springs it would benefit him. He cannot well go to the Springs, but thought he could have the water sent to him here. I would like to have your advice if there are any springs in Bedford that would benefit my patient, and if so, could the water be sent here. If the Bedford Springs will not benefit him what would you advise?

C. M. LENHART, M.D.

ZANESVILLE, OHIO.

[I would advise half a glass of the Bedford magnesia water to be taken every morning before breakfast, as hot as it can be borne. If this purges, let him take half a pint by enema, hot, with 10 drops of laudanum and half a drachm of bismuth subnitrate dissolved in it. Diet: hot milk, raw beef, raw white of egg, and bovinine if any strengthening agent be needed. Your druggist can obtain the Bedford water by writing to the Springs (see advertisement). For the muscular pains, faradization and inunctions with hot lard.—W. F. W.]

CASE OF SCIATICA TREATED BY FARADIC CURRENT.

SEPTEMBER 10 there came to my office a German named Gus G. His home is eight miles north of Wittemore, a town twelve miles distant in an adjoining county. Sciatica of the right hip the disease. His condition was pitiable. For six weeks he suffered, having contracted the torment while driving a binder. On examination I found pain intense, and several rectangular spaces of blistering on the hip. I tried deep injections of morphine and atropine, and succeeded in at least lulling the pain. This I continued for two days, and then began the faradization. From the start the electricity told, and after four days the man could walk upright, and is free from pain.

I used the salicylic treatment in conjunction with the electricity. While the patient held either positive or negative pole I used its fellow with brush or ball. My battery is an ordinary pocket one, and in this case it amply justified the great repute of electricity in sciatica.

W. J. NOLAN, M.D.

EMMETSBURG, IOWA.

A SINGULAR NEUROSIS.

I HAVE been actively engaged in the practice of medicine for the last twenty-six years. I received my medical training at the Medical College of Virginia and Bellevue Hospital Medical College. I am of an unusually long-lived family; all my grandfathers and mothers having died between eighty and ninety years of age. I am five feet nine inches in height, weigh one hundred and seventy pounds; have very black hair and beard, with rather fair skin; dark grey eyes. I have never had a serious sickness, with the exception of ague in 1868, contracted on the Mississippi river. I have lived in Florida eleven years. I am troubled with hemorrhoids to some extent. But to my trouble. Just as I begin to doze off at night, or lose consciousness, I awake with a scream, or cry of terror, which, as well as I can tell, is caused by cramp of the stomach or of the heart; sometimes I think it one, sometimes the other organ affected. It never lasts over two seconds, and as I am only partially conscious I cannot tell much about it. I am wide awake then for, perhaps, ten or more minutes, when the same thing is repeated over and over during the night; until about three o'clock in the morning I drop off into a refreshing sleep, feeling none the worse during the day. Now I have been troubled in this way at least four years, *every* night, unless I take chloral, which is the only relief or remedy that has given me any relief. I have tried somnal, antikamnia, etc., *ad infinitum*. Morphine I cannot take at all; it appears to aggravate the trouble. So you see I am becoming a confirmed slave to the chloral habit, and I am sure it is beginning to affect my general health, my nervous system, and more than all, my mind. Now as to the cause of it. My father, who died two years ago, and had been in practice for fifty years, contended that it was from overeating at supper; but I am sure this

is not the cause of it, as I have tried going to bed supperless, night after night, with a repetition of the same *horrible* sensation. I have tried all kinds of diet, but it seems to have no beneficial influence on the trouble. From boyhood I have been troubled with acid stomach after meals, for which I have taken about half a teaspoonful of bicarbonate of soda for the last thirty years. I imagined that this had something to do with it, and stopped the soda with no perceptible results.

Now I am an inveterate tobacco chewer, don't smoke, but chew almost incessantly when awake. I have tried often to give up the habit, but have a tendency to accumulate fat, and begin to increase in weight as soon as I leave off the tobacco, and this increase in fat aggravates my peculiar symptoms. Now, doctor, what am I to do? If you can assist me I sincerely trust that you will do so. I am willing to try anything. In my twenty-six years of practice I have never met with a similar case. * * *

[Stop the tobacco, chloral and soda at once. Limit your diet to milk, lean meat, cooked fruits and vegetables, and a very little stale bread or crackers toasted. Avoid sugar, fat and starches, pork, veal, peas, beans and cheese. Take the toast with hot milk alone for supper. If hungry at bedtime, take a glass of hot milk.

℞.—Acid hydrochlorici dilut..... ℥vj.
Vin. ipecacuanhæ..... ℥ij.
Strychninæ sulphat..... gr. j.
Tinct. hydrastis..... ℥ij.
M.—S. ℥j in water with the first part of each meal.

Gradually increase the strychnine to toleration.

After supper, take $\frac{1}{50}$ gr. of tartar emetic every ten minutes until slight nausea or giddiness manifests itself.

If the acidity be present, take a pinch of bismuth subnitrate.—W. F. W.]

The Medical Digest.

Exudative Laryngitis—A Substitute for Intubation.—L. L. Palmer (*Ontario Medical Journal*, September, 1892, p. 57), suggests the removal of the exudation by means of a camel's-hair brush on a platinum probe, the bristles pointing to the handle. This is carefully introduced into the larynx, as in intubation, and the membrane removed by the instrument or by the subsequent coughing. Instead of the brush a probe wrapped with absorbent cotton may be employed.

Prevention of Miscarriage.—G. R. Watson (*Ontario Medical Journal*, September, 1892, p. 56), records several cases. In one the pains were arrested in the active stage by half drachm doses, each of laudanum and fluid extract viburnum prunifolium. The fœtus was then dead, and was removed easily three days later. In the second case there was a history of repeated abortions, but no specific history. Iron and iodides were given during pregnancy; the child was born at the eighth month, but lived. The third case was a woman who had aborted several times; was three months pregnant; os dilated, hemorrhage present, with pains. A drachm of viburnum opulus was given every twenty minutes in hot water, a belladonna suppository introduced in the rectum, and when this organ was quiet, an enema of hot water administered. The miscarriage was prevented.

Diseases of the Right Iliac Fossa. —*General Conclusions.*—1. Never adopt the rule of making operative interference the last resort in the treatment of disease peculiar to the right iliac fossa.

2. The only genuine safety for a patient with a diseased vermiform appendix is to have it placed in a bottle of alcohol for the adornment of some surgeon's pathological museum.

3. Early operation in disease of the vermiform appendix is the only safeguard against recurrent attacks of inflammation, perforation, suppuration and death.

4. Never wait for suppuration in attacks of acute appendicitis. Such practice is just as sensible as it is to wait for stercoraceous vomiting and gangrene of the bowel before operating in strangulated hernia; for, like in strangulated hernia, procrastination is the thief that has stolen thousands of patients from the physician and surgeon, and given them to the undertaker.—Reed, *Lancet-Clinic.*

Cholera.—Parkin recommends the following treatment: Dissolve thirty grains of pulverized carbonate, or bicarbonate, soda or potassa in a large tumbler with two ounces of water and two drachms of syrup. Thoroughly mix. Dissolve thirty grains

of citric or tartaric acid in an ounce of water, pour into the first tumbler and drink before effervescence ceases.

Instead of the solution of acid an ounce of fresh lemon juice may be used. You need not then add the syrup as the mixture is sufficiently tenacious. In the preliminary diarrhœa take three or four doses as above at two hour intervals.

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. Bing, M.D., Chester, Pa., Translator.)

Noctural Incontinence of Urine in Children, and its Treatment by the Tincture of Rhus Radicans (Dr. R. St. Phillipe).—Nocturnal incontinence of urine is an affection, or rather an infirmity often met with in children, whose cause has often been discussed, without having been definitely established, and whose treatment has tried the knowledge of physicians, by its bizarre and tenacious characters.

The diversity of opinion, and the multitude of remedies, plainly indicate that it does not always depend on the same cause. The mechanism alone, must be always the same, and it is just here where the difficulty lies. Excepting all anatomical proof, there only remains physiological interpretation which is difficult of demonstration however ingenious and rational it may be. That is why science is still seeking for an absolutely satisfactory theory of this special form of incontinence, which belongs almost exclusively to childhood and which distresses and worries the parents not without reason. What should we understand by the term "incontinence?" When a child who has previously had complete control of his bladder, suddenly loses that power while in good health, we say that he is a subject of incontinence. This incontinence may be diurnal. It happens then, that the child may be pressed with the necessity for urinating and may let a few drops escape. But this is a somewhat different affection, and nearly always connected with organic lesions. Quite otherwise is nocturnal incontinence. The involuntary emission occurs from an hour and a half to two hours after retiring. It is usually a single occurrence, sometimes it may occur in the morning.

According to Samuel Adams, this incontinence was met with 55 times in 19,261 children treated in the hospitals of Georgetown, Boston, Philadelphia, or about 1 in 350.

The disorder persists for months, years, and sometimes into far advanced adolescence, and, contrary to common opinion, it resists till dentition, puberty, and even (saving exceptions) until marriage. Then some day, after having escaped all pursuit, it suddenly vanishes spontaneously, leaving no traces, or on the contrary leaving as sequels, seminal emissions, frequent and imperative calls to micturition, and even the formidable neuroses of hysteria, or epilepsy. Oftentimes it has been preceded or accompanied by nightmare and nocturnal terrors, another sign of hereditary psychopathy. This incontinence must be distinguished from incontinence following distension of the bladder. It must also be distinguished from secondary or symptomatic incontinence. When a child presents itself with urinary weakness, many points are necessary to the diagnosis.

It is necessary to seek:

1. If there exist any malformation, lesion, or alteration of the genito-urinary organs capable of explaining the fact, such as phymosis, balanitis, vulvitis, calculus, etc., if any neighboring parts are affected, as vaginal fissure, rectal fissure, worms, or if the urine is normal.

2. Whether the child is addicted to masturbation, an important factor, not always easily traced, the mother being loath to accept any conclusion of this kind.

3. To discover if the involuntary micturition is the result of a commencing lesion of the spinal cord or column, or if it is a symptomatic manifestation of epilepsy, which is, as well known, frequently nocturnal. If, in short, it can be traced to weakness, caused either by fear or by dreams. And when the ground has thus been cleared, and the question narrowed down and circumscribed, one will be authorized to conclude as to the existence of "essential" nocturnal incontinence of urine.

The characteristics of this affection are then to be primitive; to be involuntary; to be independent of repletion of the bladder; to be produced at night during sleep and in the recumbent position. What is then the pathogeny; what the mechanism of this affection; how and why is it produced?

Some say with Trousseau, "Involuntary micturition is due to excessive irritability of the bladder and increase of its ex-

pulsive power," and base their treatment by belladonna on these suppositions. But, as Sardac says, "It is difficult to admit that this irritability exists without determining cause, and one cannot see why the incontinence should cease during the day;" others pretend that the sole cause exists in atony of the posterior urethra, the sphincter of the bladder, the bladder itself counts for nothing. This explanation which seems to confirm the treatment by electricity which results from it is not applicable to all cases. It scarcely accords with the teachings of physiology.

In healthy children the idea of atony limited strictly to the vesical sphincter is rather far fetched, and one has to seek further for the cause. The true cause must be sought for in the nervous system. There exists in the cord (as shown in the works of Budge), two distinct routes for the motor nervous filaments of the bladder, one is in the anterior roots of the third and fourth sacral nerves; the other is by the hypogastric plexus. The first connects with the brain by a nervous cord which descends from the cerebral peduncle in the anterior columns of the spinal cord. As to the vesical nerves contained in the plexus, they came from a very limited part of the lumbar cord.

Things being so, says Jaccoud, in his book on "Paralysis," the fibers which transmit the voluntary impulse to the bladder, that is to say, the motor fiber of the sphincter, should be contained exclusively in the cerebro sacral bundle, as the motor fibers which, arising in the cord, reach the bladder by the hypogastric plexus they are completely foreign to the voluntary act, and are distributed to the expulsory muscles. One may observe further, in a state of health, a fact which well exemplifies the antagonism of the two orders of vesical nerves. The complex muscular act which influences micturition is a reflex act, which succumbs to the special sensation produced by fullness of the bladder; when this impression, transmitted to the cord, has excited the corresponding motor group, and micturition is about to take place, the will, put in play by another reflex, may determine a strong contraction of the vesical sphincter and its congeners in the urethra, and oppose efficaciously, during a longer or shorter time, the effects of the contraction of the expulsory muscles (formerly called the muscles of the body of the bladder) "*en résumé*," the cord exerts a double influence on micturition, for which it is at the same time a functional center and a simple agent of transmission, and in that way allows us to understand the functional inertia of each of the motor systems of the bladder. But since the nervous system may be altered in its texture, as in paralysis, or in its functions, as in inhibition, the complex act of micturition undergoes a splitting up, the reflex which goes to the brain to solicit the will, that is to say, the resistance—the obstacle—the contraction, will no longer act, the mechanical act alone will be in operation, and the evacuation will take place without warning to the subject. It may not even awake him.

Children subject to essential incontinence all present, authors are unanimous on this point, an organic hereditary defect. Their nervous system is not in equilibrium.

Sleep, which for others is repose of all the organs, brings to them, on the contrary, disorders of circulation, molecular changes, a sort of "neurolysis," with strange and multiple effects, here showing themselves as nightmare and terrors, there as sonnambulism and sudden cardiac palpitations, in others as involuntary micturition, spermatorrhœa, or even epileptiform crises. These are doubtless unhealthy, neurasthenic, hysterical subjects; therefore, it is not astonishing that they present disorder of a function which plays an important and even preponderating rôle. This interpretation appears to best meet the physiological facts. Children of this sort are "pollakiurics," that is to say that before having incontinence they have frequent need to arise to urinate, a quite exceptional thing at their age, and which already shows commencing disturbance, exaggeration of action of the sensory nerves of the bladder, an exaggeration which ends, according to a well-known law, in neurolytic exhaustion. Therapeutic indications should, the author thinks, be based on the above facts.

The remedy proposed by Trousseau, belladonna, whose action is real, if not constant, acts probably on the nervous system much more than on the muscular system of the bladder. The same holds with strychnine, suggestion, hydrotherapy, and reconstructive treatment. But

all these things proving useless something else must be sought. The author thinks he has found the desideratum in rhus radicans.

Rhus toxicodendron, poison ivy, is not the plant used by the author. The remedy is well borne, giving rise to no disturbance of the digestive function. No nervous action, except sometimes spasm of the bladder, on account of which patients experience a frequent need to urinate and some vesical tenesmus. It is just these phenomena which would make it likely that rhus radicans would be useful in the treatment by acting directly on the vesico-spinal center and indirectly on the bladder.

The author has used the tincture since 1890, with good results. The formula is as follows:

R.—Rhus radicans leaves dried..... 1 part.
Alcohol (210 Carter's scale)..... 5 parts.
Macerate for fifteen days; express and filter.

To commence with 5 drops, morning and night, to children of two to six years, pushed in rebellious cases, and in children over six years to 40 drops per day. Usually a favorable effect is soon seen. When cured it is necessary to take it from time to time, as the habit sometimes recurs before its final disappearance. It must be well understood that the remedy will act so much the more surely as the disorder is of essential nervous origin. The author gives a statement of his cases: 5 cured, 6 improved, 4 unimproved, 15 cases.—*Journal de Med. de Bordeaux.*

TÆNIA.

M. Beranger Ferand, in a communication on "The Geographical Distribution of Tænia in Man," presented to the Academy of Medicine, of Paris, says that it is difficult to establish this distribution for three reasons. For one thing our knowledge rests on isolated indications for a certain number of countries, while we know nothing precise for many others. For another thing the distinction between armed tænia and unarmed tænia being meant, one is often obliged to conjecture as to which variety an author speaks of. In the third place, it appears certain that following the periods where observations have been made in the same country, the frequency of such or such variety has oscillated with sometimes wide limits.

These reservations made, we can say that the armed tænia (T. solium), having the hog for its provisional host; the unarmed tænia (or T. medio-cannelata), living in the ox in the state of cysticercus; the bothriocephalus, haunting certain kinds of fish during its laval period, these parasites may be met with in man. The first, in countries where pork is largely used for food; the second, in countries where beef is the popular meat; the third, where the base of nourishment is fish. This teaches us that the Mahometans and Jews, to whom pork is an abomination, should be rarely attacked with tænia (armed), while, on the contrary, the Germans and in the Northern United States, where much pork is consumed, should often present it. Also it indicates to us that in countries where beef is consumed raw, or underdone, the unarmed tænia should be common. Finally, individuals who consume certain kinds of fish should be liable to bothriocephalus, whilst their neighbors, who avoid it, should be exempt. The facts corroborate these propositions, but the specifications are too general and vague to suffice us, and more detailed and precise indications must be sought; therefore, the author passes in review the five continents, speaking of both tænia and bothriocephalus.

EUROPE.

Tænia (armed) observed in all parts. Rare in Southeast where Mahometanism and the Jewish religion prevail; also in Turkey in Europe, the Danube provinces of the shores of the Black sea; relatively rare in Italy, France, Spain, and England, where pork, although eaten, is generally subjected to cooking processes. More frequent in Central Europe, in Germany, Austria, where pork is largely used—often in a raw state or insufficiently cooked to destroy the cysticercus. A number of observers have shown that in this part of Europe, the armed tænia is in close proportion to the quantity of pork consumed. It is therefore more frequent in Thuriugia, Westphalia, Brunswick, Hesse, and Wurtemberg, than in Switzerland and Austria. During the last fifty years, diseased pork has become rarer, and therefore there are fewer cases of tænia. This has been brought about by better methods of feeding and dressing. It has come to pass that in certain countries, as Hungary and Galicia, where armed tænia was formerly much more frequently met with than in Germany, that it is comparatively

more frequent to-day, not that it is really so, but because it remains stationary, whilst it has diminished in Prussia, Saxony, etc. A powerful cause in lessening this frequency of tænia in Germany, is the popular fear of trichinosis, which has resulted in better cooking of pork which, while it has destroyed the trichina, has, at the same time, killed the cysticercus.

Whilst the armed tænia seems to be met with by preference in Central Europe, the unarmed tænia is more usually observed in Southern and Western Europe. In Eastern Europe it is also frequent. It tends to increase in frequency in the Northwest and in England; in fact, Cobbold said that unarmed tænia became more frequent in proportion as armed tænia became more rare.

The line of demarcation between the two worms is not absolute in certain zones —both are met with at the same time. Still, in the basin of the Danube, the unarmed tænia is met with, while in that of the Neckar, it is the armed variety. Towards the North of Germany, tænia inarmata preponderates over tænia armata; also in Denmark. The unarmed species has increased in so singular a manner, that hygienists have propounded the following question: Is this tænia of recent origin? or is the apparent increase due to a better knowledge of the parasite? The first may be answered negatively, the second affirmatively, and also that there has been a real and marked increase.

The tænia nana (dwarf tænia), discovered at Cairo in 1851 by Bilharz, has been observed in different European countries, and it is probable that in time this worm will be frequently met with, especially in children.

Bothriocephalus.—This worm is met with in Europe, in two distinct centers—(*a*) French Switzerland round the great lakes; (*b*) Russian and Swedish provinces of the Baltic. In Italy it is on the increase; it is, however, rarer than the unarmed tænia. In Germany it is also increasing. It probably comes in the fish from Lake Stamberg, which have become infected by the dejections of Swiss tourists. It does not appear to exist in Austria or Hungary. The second center appears to be along the right bank of the Vistula. As the neighborhood of the coast, rivers and lakes is left behind, the worm becomes more infrequent, although it is rarely seen along the Scottish or Irish coasts. The reciprocal infection between fish and man, and *vice versa*, tends to increase.

ASIA.

The information on tænia in this continent is limited. On account of the predominance of the Mussulman population, tænia armata is comparatively rare. Tænia inarmata is more common in Tartary, Syria: here affecting one-tenth of the population. In India proper it is very common. Gordon says of the English population, that one in three is attacked after two years in the country. The etiological conditions of transmission of the worm is clear enough here, for the Mussulmans, who eat beef, are subject to it, while the sects belonging to the Buddhist creed are not affected by it, since they do not eat it. The worm is also frequent in Japan, Java, Tonquin, etc.

Tænia nana is not known in Asia. Bothriocephalus is also infrequent.

AFRICA.

This country, with certain regions, is the country *par excellence* of certain tapeworms. On account of Islamism, the armed tænia is rare, being met with most frequently in Algeria. Unarmed tænia is common to the whole country. On the Gold Coast it is rare, but about the Cape of Good Hope it is frequent.

Tænia nana was met with first, in this country, at Cairo, in a subject dead from meningitis.

Bothriocephalus has not yet been met with, but will probably soon be heard from in the vicinity of the great lakes, Tchad, Nyanza, Tanganyika, etc.

AMERICA.

America is not exempt from the parasites, and, as observations are more carefully made, the worms will be met with more frequently. In all American countries the colored races seem more disposed to the worms than the white race, this fact depending on better hygienic methods among the latter. "Tænia armata" has been met with in North America, and seems to be on the increase, on account of the pork industry; still, it is not as frequent in the United States as in Central Europe. In Mexico it is very rare. As to the T. inarmata, if it is rare in the North and Central America, it is

common enough in Brazil and La Plata, where the vast cattle ranges make a good home for it. It has increased rapidly in Chili and Peru. Where the country is well wooded it is infrequent. Dwarf tænia is comparatively rare. Bothriocephalus has not been often met with, probably on account of not being looked for. It will be met with round the great lakes.

OCEANICA.

As pork is much used in these islands, the rarity of T. armata is rather surprising. It may be that the hogs living on vegetable matter chiefly are not liable to the parasites. The T. inarmata is frequently met with in New Zealand and Australia. Bothriocephalus has not yet been met with.

—*Bulletin d' Academie deMédecine.*

N. B.—The terms armata, inarmata and nana refer to T. solium, T. medio-cannelata and Nana respectively.—*Bing.*

Prostitution in Paris in 1891.—Among 2,941 registered women arrested for infractions of the ordinances, 251 only were in a diseased condition; whilst out of 2,637 unregistered women arrested for the same offences, there were 1,155 contaminated. The proportion, therefore, is about 8½ per cent. of sick among the registered, and 43 per cent. among the clandestine prostitutes. In Brussels, where the regulations are very severe, the proportion is still smaller. On the contrary, the number of patients among the clandestine prostitutes constantly increases, so that a new hospital ward has had to be opened to them.

—*L' Union Médicale du Canada.*

Results Consecutive to Intra-Nasal Cauterization.—In a majority of five cases cauterization had been practised for enlargement of the turbinated bones, and the immediate result, so far as amelioration of the symptoms is concerned, has been variable. The patient returned (during two years) and complained still of obstruction in the nose. Rhinoscopy showed in some, at the seat of the cicatrix, tumefaction of the mucous membrane, determining obstruction. In another case the membrane was fissured by several furrows—this case had been frequently cauterized in different hospitals. Some cases would seem to show that cauterization does not fulfil its purpose, when it is badly done, as for instance when there is produced in the tissues a deep cicatrix, or on the contrary, when the action is too superficial, or again, when it is either too limited or too extensive.

—*Revue Internat. de Rhin. Otol. Laryngologie.*

Croup and Suffocative Laryngitis.—For some time specialists have called attention to the diagnosis between croup and suffocative laryngitis, which is nearly always stridulous laryngitis. Dr. Bogot, reviewing these facts, recalls that while the diagnosis itself does not offer many difficulties, suffocative laryngitis may, however, end in asphyxia just as croup does.

This form of laryngitis is distinguished from croup by its want of relation to diphtheria, by the almost complete absence of contagion. It may be secondary to measles or influenza. The affection begins with slight cough and hoarseness. As the general state is good, the child continues to run about; and there comes a moment when the symptoms intensify and an access of suffocation occurs which may lead to fatal asphyxia. It is this circumstance which has led to the confusion of this affection with croup.

On examination the child shows none of the usual signs of diphtheria—no white patches in the throat, no false membrane expelled by cough, no nasal flow, no enlargement of the glands of the neck. The general condition is excellent up to the moment of the attack of asphyxia. The respiration is whistling. Fever slight, no phenomena of intoxication (CO_2).

The affection should be treated as an acute laryngitis. The application of revulsives or even of leeches in front of the throat, a light purgative, wrapping the lower limbs in cotton wadding. Diaphoretic draughts, rest in bed in a moderately heated room. If the signs of asphyxia are threatening, constant spraying with an infusion of eucalyptus leaves, or a carbolized solution. Tracheotomy remains as a last resource, and is the heroic treatment, as it suppresses the mechanical obstacle which causes the trouble. The affection may last two or three weeks, as recurrence is very easily brought about, and precautions must be taken for some time.

—*Rev. de Therapeutique Medico-Chirurg.*

SPIRITS OF TURPENTINE is recommended by the *Lyons Medical* for removing the odor of iodoform from the hands, the application is followed by the use of soap. Utensils soiled with the drug may be cleansed in this way with ease.

—*Courier Medical.*

PROFESSIONAL SECRETS IN COURT.—At its last session the conference of advocates of the Court of Appeals of Paris discussed the following question: "Whether a person who by profession or rank becomes a depositary of a secret, when called on to testify, is it advisable for him to refuse to testify to the facts confided to him, even when released from his obligations by the individual who confided in him?" The conference decided affirmatively.

—*Med. Chir. Rev. de Therapeutique.*

THE ANTI EMETIC ACTION OF MENTHOL (Dr. Blanc).—The action of menthol in this respect is not easily explained. The phenomenon of vomiting is in itself a complex, and according to the most recent opinions there is probably a bulbar "vomitary" center, in close relation to the respiratory center whose reflex motor action can be put in play by very dercise causes, *e. g.*, the direct action of special drugs; general encephalic excitement, propagated to the medulla; irritation of the abdominal sympathetic plexus; by reflex action from other organs, especially irritation of the gastric mucous membrane. This gastric irritation is accompanied by slow and weak contractions of the mucous coat, and acts as a reflex call, resulting in a dilatation of the cardiac end by contractions of its longitudinal fibers under the action of the pneumogastric, and a sharp depression of the diaphragm. This is followed by energetic contractions of the abdominal muscles, and by a more pronounced depression of the diaphragm.

Emetics are of two kinds. Those which provoke gastric nausea, and those which act through the medulla without the stomach being previously concerned in the act.

Ipecac, copper, etc., belong to the first group. Apomorphine is the type of the second, although it belongs to the two groups since it can act either directly on the stomach, or indirectly through the circulation. Emetine also causes vomiting at the end of two hours, and when one might think the drug had been eliminated, it arises in the stomach and produces its local action.

As to anti emetics, their mode of action is obscure and hypothetical. We witness here, a singular phenomenon, anesthesia; and paralytic stupor of the organ cannot enter into the explanation, for the anti-emetics are stomach stimulants, and these act in proportion to the dose. Take the two most certain anti-emetics (exclusive of ice), carbonic acid and menthol. They are both powerful adjuvants to gastric contraction in moderate doses; but in high doses gastric spasm and nausea are arrested to such an extent that ipecac given in full doses may lose its emetic action, if preceded by menthol. The explanation of these facts can only be made in two ways, either gastric stimulants produce, in full doses, a paresis of the organ, or else we must modify the idea which we have at present of the act of vomiting.

—*Revue de Therapeut. Med. Chirg.*

THE disagreeable odor of ichthyol may be masked by addition of a small quantity of coumarine.

—*Bulletin Gen. de Ther.*

FORMULARY (*Bulletin Gen. de Therapeutique*). For warty vegetations of external genital organs.

℞.—Salicylic acid..... ..... 2 gms.
Acetic acid..... 30 gms.
Mix. External use.

Apply to the vegetations once or twice in 24 hours by means of a small brush, 2 or 3 applications are sufficient. The pain is slight and transient, which is an advantage.

ICHTHYOL EXTERNALLY IN GYNECOLOGY (M. Freund):

℞.—Sulpho-ichthyolate of ammonium 5 gms.
Glycerine..... 100 gms.
M. For wetting vaginal tampons.

℞.—Ichthyol..... 1 gm.
Cocoa butter... ..... 2 gms.
F. S. A. One suppository.

RELAPSE, FALSE RELAPSE, AND RECURRENCE OF SCARLET FEVER (Janselme).—Anomalous eruptions may supervene during the course of scarlet fever, or a certain time after the cure. The author divides these into three classes. Under

the name of false or spurious relapse is to be understood a new exanthem, appearing before defervescence, during the evolution of certain scarlatinas, whose febrile period is abnormally prolonged. It may be the result of a secondary infection having the throat as a point of departure. The eruption is measly, and the spots only coalesce slowly.

The reproduction, after apparent establishment of convalescence of the whole or a part of the symptoms, which have characterized the first attack, constitutes the relapse. Observations show that it is principally during the third or fourth week that this occurs. It may be mild, medium, or severe. Prognosis generally favorable. The crowding of patients in a small space predisposes to this complication. The "recurrence" is a new attack coming on after complete cure. This may be explained by a second infection being rendered possible by loss of immunity, the interval varies, but is generally some months. Hereditary influence may favor the recurrence. The author insists in closing his article on an antisepsis and isolation.

—*Rev. de Therap. Med. Chirurg.*

Dangers of Iodoform Injections.—Dr. Drusman states the following: A woman of thirty years, with housemaids' knee, received at different times injections of iodoform oil. Six days after the last injection the patient who had received (in the course of three months) fourteen grammes of iodoform in ten injections, presented agitation and phenomena of excitation. She was sent home, and after a time re-entered the hospital where resection of the knee was performed. In the cellular tissue under the patella a mass of the size of a cherry was found, consisting of iodoform. In another patient, after injections of the oil, a maniacal attack occurred which necessitated a sojourn in an asylum. A third patient, weakened by disease, succumbed to the influence of iodoform intoxication. The case with which symptoms may occur depend on the capacity for absorption possessed by the various tissues. Injections should be practised at considerable intervals, and in cachectic subjects, or those presenting any nervous symptoms, should be very cautiously used.

—*Revue de Therap. Med. Chirurg.*

Extended Perforation of the Cartilage of the Nose in Typhoid Fever (Gellé).—After some considerations on the effects of the general malnutrition in this disease, the author points out that localization of the lesions is explained as much by decubitus as by friction or repeated pressure on a particular part. In this case the ground has been more or less prepared either by epistaxis, or by the scratching following pruritus. In his case Dr. Gellé could not attribute the ulceration to thrombosis or embolism. The patient had had frequent epistaxis, and had torn his nostril with the finger nail. The ulceration was slow, and not noticed till convalescence set in.

—*Revue de Laryngologie, etc.*

Idiocy in English Women. — In spite of the delicacy of the subject from the British matron's point of view, some loud complaints respecting the behavior of the Metropolitan Railway in adopting the "penny in the slot" principle for ladies' lavatories, have found their way into the columns of the lay press. We must admit ourselves ignorant on the legal point as to whether railway companies are compelled to provide for the physiological needs of passengers. Certain it is that ladies are very scurvily treated in this respect. At the same time it is difficult not to sympathize with municipalties in their fruitless attempts to grapple with the question. Having awakened to the necessity of making some provision for the fair sex, a large number of underground conveniences on a palatial scale have been constructed, whereof a portion is set apart for ladies' use. Obviously it is desirable to place these "refuges" in a conspicuous positions, otherwise the object would not be obtained, for no amount of hydraulic pressure would induce the average lady to "ask the policeman." Yet this very conspicuousness is made the gravamen of a charge of want of delicacy against the London County Council, on the ground that no lady could be expected to march deliberately to the citadel, at the risk of being subjected to ribald insults. The genuine British female's modesty is fearfully and wonderfully made, and is brought to bear in the most unexpected, not to say unnecessary places. It is difficult to see what the authorities can do to meet the rights and right the wrongs of the case. —*Med. Press.*

CONGENITAL CHOREA.—INABILITY TO CO-ORDINATE THE FUNCTIONS OF THE LIMBS OR SPEECH.—LACK OF MENTALITY.—LINEAR CRANIOTOMY.—This boy was four years old. He had never been able to walk. Was constantly making choreic movements and unable to regulate the evacuations of the bowels or bladder. Had never had any epilepsy, so far as known, but was unable to learn, owing to the fact that his eyes were in constant motion, and that he seemed to be lacking entirely in the quality of nervous energy necessary for the reception of mental impressions. He took food when it was given to him; was unable to feed himself. Required the constant, unremitting attendance of a nurse. The disease existed from birth. The physician, who had attended the child, attributed the defect to compression of the brain by forceps during birth. Measurements of the child's head showed deficiency of development, and there was a lack of symmetry in the general shape of the organ. Linear craniotomy was advised as the only thing promising any hope of relief. Incision was made from the left frontal eminence to the occipital protuberance. The scalp was separated, the periosteum raised, and a strip of bone half inch in length was taken out from the skull, reaching from the frontal eminence to within one inch of the occipital protuberance. The periosteum was drawn over this opening, the scalp replaced, and the whole securely fastened by interrupted sutures. Antiseptic dressing was applied. Recovery from the operation was successful, and the friends now think there is some improvement in the chorea. Since the operation, which was performed three weeks ago, there has been a marked improvement in the general condition of the patient. Of course it is too early to state yet what the outcome will be as regards the restoration of the functions of the brain, but certain it is that in the process of repair the opening, which was barely half inch in width at the time of the operation, has spread to three quarters inch, and that this is the apparent width of the fissure in the skull now, beneath the united scalp. Through this fissure can readily be felt the pulsations of the brain.—Wyman, *Detroit Hosp. Rep.*

THE USE OF THE TONSILS.—Physiologists have long been troubled by the existence of the tonsils without an evident excuse for their presence in the human body. A physician has recently decided that the responsibility does not exist with the physiologist, but belongs to the pathological field. He claims that the tonsils are of pathological origin and should be treated as such. The doctor is not content with the multiplication of new diseases, but must also claim physiological organs as well. This report does not tally well with the conclusions of another investigator who found that the tonsils were forts manned with friendly bacteria ready to destroy pathogenic germs. What theory may we expect next?

—Whelpley, *Med. Fortnightly.*

MALPRACTICE SUITS.—The question naturally arises: Is there no way of fighting this constantly growing evil of unfounded malpractice suits? There are several, in our opinion, but the problem is very much like the one in the fable—who will be the cat? The most simple one is to refuse to attend any patient who is unable to pay a good fee. This would relieve the practitioner of any possibility of incurring the risk of a suit for malpractice. A patient able to pay a fee, will not hesitate to pay for a consultation whenever the attending physician or surgeon deems such necessary, and the result will be the best skill attainable will be given to the case. It will be urged, on the other hand, that this is working a hardship on the poor, because of their lack of money. But there are dispensaries and hospitals in numbers, where no fee or reward is asked or expected. Not being under monetary obligation they will not hesitate to come as often as is necessary, and, as a result, better conditions will be obtained. When the poor are so inconsiderate as to jump at an opportunity to defraud a physician of money, besides his services and time, they are surely not entitled to more than a very small share of the philanthropy of those who are most apt to suffer in every respect, as a reward for misdirected charity.—*Med. Review.*

SKULL FRACTURES.—In the medical treatment of intra-cranial inflammations, when grave, contrary to the violent objections raised against them by many, I have frequently resorted to opiates to quiet the patient, and it seems to me with decided benefit, and, so far as I could ob-

serve, no harm. In several cases full doses of bromides, rectal injections of chloral, hypodermic injections of hyoscyamine, the sedatives and narcotics generally, as well as the art of a trained nurse failed utterly to restrain the restlessness and extreme jactitation that was rapidly exhausting the patient, and, I believe, fanning the flame of inflammation already raging. When at last this fury was found to give way under a hypodermic injection of sulphate of morphine to calm repose, I felt that the patient was the better for it.

—G. W. Crile, *Lancet-Clinic.*

Importance of Bacteria. — "We must not think too hardly of bacteria," says Dr. H. W. Conn, of Middletown Wesleyan University. "It is true that they are the causes of evil, that they produce disease; but it is also true that they do good. They are our enemies, but they are also our closest allies. It is true that without them we could not have our smallpox nor our yellow fever, we could not have our diphtheria nor our scarlet fever, neither should we have any of the epidemics. But when we remember that it is through the agency of these organisms that we bake the loaf of bread that comes to our table; that the immense brewing industries connected with the manufacture of alcoholic liquors are possible; that without them we could not get our vinegar or our lactic acid; that without them we could not make our ensilage; that these bacteria give the butter-maker the aroma of his butter; that it is the decomposition products of the bacteria that be used over and over again for the support of life; and, lastly, that it is only through their agency that plants were originally enabled to get hold of nitrogen at all, and that we may hope for a continuance of a supply of nitrogen to the soil—we will recognize that the power of bacteria for good far outweighs their power for evil."

—*Doctor's Weekly.*

Use and Dosage of Lysol.—In view of the menacing epidemic of cholera, I regard it my duty to record my results with lysol in dysenteria and cholera nostras. I used lysol in doses of 3.0 to 10.0 grammes, used in 1 per cent. strength as clysmata. The astonishing results obtained by this means lead me to ask the profession to combat cholera and its relatives by this method.

The administration of lysol was always combined with that of a stimulant.

Following are the histories of three most interesting cases:

May 11 I was called to the family of G——. The three children were seized with scarlet fever, presenting nearly the same symptoms. The most alarming symptom was the high temperature, in all cases 103.5° F.; the children also had all the other symptoms relating to the throat, lungs, tongue, eyes, and nose.

The urine of the two elder children showed much albumin and traces of sugar.

The conditions, especially of the eldest child (girl of seven years), and of the babe (fourteen months old), were very critical. The second child, a girl, five years of age, did not seem to be as ill as the others.

I was not misled by my expectations of the internal antiseptic action of lysol. I gave it with sherry wine in the proportion of lysol 5.0 to vin Xeres 10.0. Of this I ordered ten, five, and three drops, for the three children respectively, to be given in milk four times a day.

The effects of these small doses of lysol could be seen within the first twenty-four hours. I saw the children twice a day to May 16, so I am enabled to give up to that date a complete temperature record.

Analyzing first the curve of M. G——, seven years of age, I have to state that this child got forty drops the first day, with an increasing dose of five drops daily. The temperature fell steadily, without any recurrent exacerbation, till the morning of May 15, after which no change could be seen.

During the whole time the urine was examined with a double object, viz., to see the effect on the albumin, and note whether phenol could be found. No trace of albumin after the first twenty-four hours could be discovered. The urine showed only one time the presence of sugar, the reason of which phenomenon I could not make out. All the other times the analysis was negative in every respect.

The decrease in the temperature curve can be seen more clearly in the cases of the two other children. The explanation of this fact will probably be that the doses of five and three drops were, in com-

parison to the age, larger than the ten drops of the older child.

On the second day the temperature of the five-year-old child rose from 98° F. to 99° F. at 6 P. M., which was the result of the neglect of the mother to give the lysol.

On the fourth day the temperature of the baby rose from 98.5° F. to 100.5° F., but this was explained by the fact that the mother gave her some beer.

These two incidents teach two things:

1. That the use of lysol must never be abandoned until the temperature has been normal for a few days.

2. That the diet has to be as restricted as possible, so that no irritation to the uropoetic system may result.

The mixture of lysol, one part, and sherry wine, two parts, could be taken very well in warm milk.

If now, finally, I should formulate a treatment concerning the cholera Asiatica out of these preceding observations, I would advise:

1. To give immediately a stimulant mixed with lysol, 2.5 grammes.

2. To wash out the intestines thoroughly with a 1 per cent. solution of lysol in warm water. This should be repeated every two hours until a change is seen.

—Vondergoltz, *Med. Record.*

News and Miscellany.

PREVENTION OF CHOLERA.

Oh! 'tis hard in these days of disease and infection,
To know how to act, to remain in good health;
An enemy lurks almost free from detection,
Neither sparing the poor, nor those who have wealth.

Dread small-pox is wafted about in the breezes,
But yet we must breathe it—can't live without air;
And measles and other such direful diseases,
Are carried about in the clothes that we wear.

But what's to be done? We can't go without clothing;
Ha! ha! Happy thought; there is one disease yet,
Infests both our meat and our water with loathing,
'Tis cholera, and that we can euchre, you bet!

For tho' we're compelled to risk small-pox and measles,
In the air that we breathe, and the clothes that we wear,
In the matter of cholera we're artful as weasels,
Exchanging cold water for whiskey and beer.

SARAH ADELE PALMER, M.D.
P. O. Box 420, Baltimore, Md.

As usual somebody rises to remark that cholera can't hurt the Jew; that he is exempt. And, as usual, somebody prevaricates.

NOTE.—I notice in the newspaper accounts of interviews of various physicians, that the cholera germ cannot be contracted by the air passages. I have always thought otherwise, and I see in Dr. Lewis' paper in THE TIMES AND REGISTER of September 10th, the only rebuttal of this idea that I have ever met with. Will not this explain its rapid spread? B.

SECRETARY J. Lewis Crew, of the Society to Protect Children from Cruelty, is endeavoring to add one more to the numerous charities of Philadelphia, in the shape of an establishment for foundlings. His plan is to locate it in the country, where good water and pure air are to be enjoyed, with suitable accommodations and trained nurses. The baby farm, or infantile slaughter house, can only be suppressed by a properly managed asylum of this kind.

DISINFECTION OF DIARRHŒAL DISCHARGES.—To physicians, nurses, etc.: At a meeting of the Board of Health of the Health Department of the City of New York, held on the 16th inst., the following preamble and resolution were adopted:

WHEREAS, The presence of cholera in this city and its relation to diarrhœal diseases makes it extremely important that all diarrhœal discharges be at once disinfected, as many cases of cholera take the form of mild diarrhœa, but the discharges in those cases are as dangerous as from the severest types of the disease; therefore

Resolved, That physicians and nurses are respectfully requested to see that this recommendation is promptly carried out, as in this way the great danger of spreading infection from unsuspected cases of cholera will be greatly lessened.

By order of the Board of Health.

CHARLES G. WILSON, *President.*
EMMONS CLARK, *Secretary.*

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS; FIFTH ANNUAL MEETING, AT ST. LOUIS, MO., SEPTEMBER 20–23, 1892.—Dr. George H. Rohé, of Catonsville, Md., read a paper upon "The Relations of Pelvic Disease to Psychical Disturbances in Woman."

The author pointed out the frequency with which bodily conditions influenced mental states. Thus a torpid condition of the intestine, Bright's disease, putrefactive processes in the intestinal canal, etc., might give rise to melancholia and other disorders of the mental functions. It is not irrational to suppose likewise that diseases of the female sexual apparatus would have a not inconsiderable influence in the production or perpetuation of mental disorders. As a contribution to the knowledge of the subject, the following report was submitted:

In a hospital containing 200 insane women, 35 were subjected to vaginal examination, and 26 found with evidences of pelvic diseases. In 18 of these the uterus appendages were removed with the following results:

Sixteen recovered from the operation and 2 died. Of the 16 recovered, 3 have been discharged from the hospital completely restored, both physically and mentally. In 10, considerable improvement followed the operation in both physical and mental conditions, and in 3, the operation was of too recent a date to allow any definite expression of opinion.

The mental disorder present in the 18 cases was melancholia in 6 cases, simple mania in 1, puerperal mania in 4, hysterical mania in 1, periodic mania in 2, hystero epilepsy with mania in 1, and epilepsy with mania in 3.

The author, basing his opinion upon his experience, concludes as follows:

"The facts recorded demonstrate—

"1. That there is a fruitful field for gynecological work among insane women;

"2. That this work is as practicable and can be pursued with as much success in an insane hospital as elsewhere; and,

"3 That the results obtained not only encourage us to continue the work, but require us, in the name of science and humanity, to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has."

ORIGINAL KERATOSIS.—A curious Jewish tradition reports that Adam was entirely clothed in a hard, horny skin, and only lost it and became a subject to evil spirits on losing Paradise. The nails are the remnants of this dress, and whoever cuts them off and throws them away does himself an injury. An old Persian chronicle says that Eve also possessed this dress, and the nails were left to remind them of Paradise.

Blobbs says his wife's nails don't remind him of Paradise by a jammed sight.

DR. HOBART A. HARE has undertaken a research into the action of chloroform, on behalf of the Nizam of Hyderabad. That youth will become celebrated if he doesn't soon settle down and keep quiet.

WEEKLY Report of Interments in Philadelphia, from September 17 to Setember 24, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	1		Gall stone	1	
Aneurism of the aorta	1		Gangrene	1	
Alcoholism	1		Hemorrhage	1	
Apoplexy	7		Homicide		1
Asphyxia		1	Indigestion	1	
Anæmia	2		Inanition		10
Bright's disease	8	2	Influenza	1	
Burns and scalds	1	1	Inflam'n brain	2	9
Cancer	7		" bronchi	3	3
Casualties	6	4	" kidneys	6	
Congestion of the brain	1	6	" lungs	8	6
Congestion of the lungs		3	" pericard'm	1	
Cholera infantum		27	" peritone'm	2	
Cirrhosis of the liver	4		" pleura	2	
Consumption of the lungs	48	5	" s. & bowels	3	6
Consumption of the bowels	2		" heart	3	
Convulsions		10	Marasmus		40
Colic		1	Necrosis	2	1
Croup		3	Obstruction of the bowels	2	1
Cyanosis		4	Old age	21	
Debility	1	4	Perforation of bowels	1	
Diabetes	3		Paralysis	3	
Diarrhœa		2	Poisoning	2	1
Diphtheria	1	26	Rheumatism	2	1
Disease of the brain	1		Stone in bladder	1	
" " heart	17	5	Septicæmia	2	
Drowned	2	1	Sore mouth		1
Dropsy	1	1	Softening of the brain	3	
Dysentery	4		Suffocation	1	
Effusion of the brain		1	Suicide	3	
Fatty degeneration of the heart	1		Syphilis		1
Fever, scarlet		3	Teething		1
" typhoid	8	5	Tumor		1
			Uræmia	1	
			Wounds, gun-shot		4
			Total	207	201

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S Navy for the week ending September 24, 1892.

HARVEY, H. P., Surgeon. Detached from St. Louis, and granted six months' sick leave.

HARRIS, H. N. T., Passed Assistant-Surgeon. Detached from Navy Yard, League Island, and to Receiving Ship "St. Louis."

STOKES, C. F., Passed Assistant-Surgeon. Ordered to Naval Hospital, Tokohama, Japan.

RUSSELL, A. C. H., Passed Assistant-Surgeon. Detached from Naval Hospital, Tokohama, Japan, and ordered to return home.

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The Times and Register.

Vol. XXV. No. 15. PHILADELPHIA, OCTOBER 8, 1892. Whole No. 735.

PAGE

ORIGINAL ARTICLES:

PRACTICAL OBSERVATIONS ON THE MEDICINAL PROPERTIES OF THE MINERAL WATER OF COOPER'S WELL, HINDS COUNTY, MISSISSIPPI. By Joseph Jones, M.D., LL.D. - - - - - - - - - 395

TREATMENT OF MALARIAL REMITTENT FEVER. By J. P. Francez, M.D. - - - - - - - - - - 396

DIABETES MELLITUS; QUICK RECOVERY UNDER DIET AND STRONTIUM LACTATE. By William F. Waugh, M.D. - - - - - - - - - - - - - - 398

INFLUENZA. By E. S. McKee, M.D. - - - - - - 398

EDITORIAL:

TYPHOID FEVER NUMBER TO BE ISSUED SOON - - 404

THE VALUE OF PAPOID IN DIGESTION - - - - - 404

SUCCESS IN THE TREATMENT OF CHOLERA - - - 404

DELIVERED FROM THE CHOLERA SCOURGE - - - 404

JOHN L. SULLIVAN A PARALYTIC - - - - - - - 404

INCREASE IN DIPHTHERIA - - - - - - - - - 404

PEROXIDE IN DIPHTHERIA - - - - - - - - - - 404

LETTERS TO THE EDITOR:

Jambul in Diabetes. *Lawrence* - - - - - - - - 405

Quantity of Morphine Taken by Habitués. *Lett* - 405

Synovitis of Knee-joint. *Field* - - - - - - - - 405

Consumption in the "Eastern Shore." *Fanning* - 406

BOOK NOTICE:

Inoculation a Preventive of Swine Plague. *Billings* 407

PAGE

THE MEDICAL DIGEST:

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—The Depopulation in France (*Le Roy*)—Inhalation of Menthol in Tracheitis (*Barbon and Martin*)—A Leech in the Larynx (*Aubert*) - - - - - - - - 403

Methods for the Prevention of Cholera (*London Lancet*)—Medicine and the Orientalist Congress (*Lancet*)—The Creation of the Office of Public School Dentist (*The Lancet*)—International Medical Congress of 1893 (*The Lancet*)—Language of Animals (*Garner*)—Sensory Symptoms in Visceral Disease (*Mackenzie*)—Cholera and Cremation (*Wells*)—Second International Congress of Physiologists—Epidemic of Ergotism (*Kortneff*)—Turpentine has the Power of Hindering Toxic Action of Phosphorus (*Bush*)—Haffkine's Method of Inoculation as a Protection Against Cholera (*Hankin*)—Experiments on the Relation of Phagocytosis to Erysipelas (*Bokenham*)—The Cholera in Berlin and in the Municipal Hospital (*Berliner kl. Wochenschrift*)—Hæmatemesis of Young Women (*Handford*)—Tincture Hemostyptica (*Kish*)—Psycho Therapeutics (*Robertson*)—Uses of the Coal Tar Derivatives (*Murphy*)—Burn of the Cornea (*Reynolds*)—Going Wild (*Phelps*)—The Subcutaneous Injection of Normal Nerve Substance in Epilepsy (*Baber*) - - - - - - - - - - 407-415

NEWS AND MISCELLANY - - - - - - - - - 416

MEDICAL CORPS, U. S. NAVY - - - - - - - 418

NOTES AND ITEMS - - - - - - - - - iv, v, x, xii

Original Articles.

PRACTICAL OBSERVATIONS ON THE MEDICINAL PROPERTIES OF THE MINERAL WATER OF COOPER'S WELL, HINDS COUNTY, MISSISSIPPI.

BY JOSEPH JONES, M.D., LL.D.,
Professor of Chemistry and Clinical Medicine, Tulane University of Louisiana, New Orleans.

EVERY careful physician should endeavor to record his experience and investigations with reference to the therapeutic value of the mineral waters of his locality.

In the month of September, 1892, I derived substantial benefit from the pure, bracing air, at an elevation of about six hundred and fifty feet above the level of the sea, and the medicinal properties of Cooper's well, Mississippi, after a prolonged illness in New Orleans, Louisiana.

The mineral water of Cooper's well is prompt and decided in its effects, which may be classified as,

1. Purgative.
2. Diuretic.
3. Diaphoretic.
4. Alterative, tonic and restorative.

1. The purgative effects are due chiefly to magnesium sulphate (Epsom salts, about 24 grains per gallon); sodium sulphate (Glauber's salt, about 15 grains per gallon); and calcium sulphate (about 32 grains per gallon).

2. The diuretic effects are due mainly to the preceding salts, and to the potassium sulphate (about 6 grains per gallon); sodium chloride (about 9 grains to the gallon); calcium chloride (about 5 grains per gallon of the water), and magnesium chloride, about 3½ grains per gallon.

3. The diaphoretic effects of the water must be referred to the action of the preceding salts upon the sudorific glands of the skin.

4. The alterative, tonic and restorative effects must be referred to (*a*), the peroxide of iron; (*b*), the salts of lime; and (*c*), the alterative effects of the magnesium, sodium and potassium salts.

The combined effects of the saline ingredients, amounting to about 106 grains per gallon (about one-fourth of an ounce per gallon), are manifest in the dark green evacuations from the bowels, and the frequent and abundant actions from the kidneys; both the liver and kidneys are freely acted on by the water, and at the same time the noxious abnormal products of the bile, torpid liver, and deranged functions of the spleen, and of the diseased and altered blood, are eliminated by the gastro-intestinal mucous membrane.

The water of Cooper's well, according to my personal observation and investigation will, when used under and by the direction of experienced skilful physicians, prove highly beneficial in the following diseased states:

1. Anasarca.
2. Ascites.
3. Alcoholism, acute.
4. Alcoholism, chronic.
5. Bright's disease.
6. Cardiac dropsy (valvular disease of the heart).
7. Hepatic dropsy, arising from chronic hepatitis.
8. Renal dropsy, arising from lesions of kidneys.
9. Calculus (uric acid, oxalates and urates).
10. Jaundice, arising from hepatic derangement.
11. Jaundice, arising from the prolonged action of the malarial poison in the spleen, liver and blood.
12. Gout.
13. Rheumatic gout.
14. Malarial poisoning, chronic.
15. Rheumatism, chronic.
16. Diarrhœa, chronic.
17. Constipation, chronic.
18. Dyspepsia.
19. Nervous exhaustion, arising from various causes, as the prolonged action of febrile poisons, especially of the malarial poison; prolonged mental exertion; the prolonged heat of summer; the abuse of alcoholic stimulants and narcotics.

The water of Cooper's well is contra-indicated in the secondary diarrhœa of phthisis; and, in fact, the disease (consumption) is not benefited, but rather injuriously affected by Cooper's well water. However, phthisical patients may derive benefit from the elevation, cool climate, and pure bracing air; and exercise over the beautiful hills and valleys, covered by the lofty, aromatic, long leaved pines.

156 WASHINGTON AVENUE.

TREATMENT OF MALARIAL REMITTENT FEVER.[1]

By J. P. FRANCEZ, M.D.,
CARENCRO, LA.

LOQUOR SUB CŒLO CARENCROSIS.

GENTLEMEN: Most practitioners are unanimous in the treatment of malarial remittent fever in recommending the administration of quinine, the sooner the better, and at whatever period or stage the patient is seen. The drug should be prescribed in full doses and at close intervals until the full physiological effect is produced. When cinchonism is induced the intervals should be lengthened without discontinuing its use, however. Cinchona or its derivatives are the only recognized specifics, consequently the sole weapon in the hands of the doctor to fight such a formidable foe as the remittent fever of the hot climates.

There are many valuable combinations with quinine to meet special symptoms. Antimony in 1-grain doses every two to three hours is very useful when the face is highly congested, red, flushed, and a violent headache. Of the other adjuvants the least dangerous and the most useful are general warm baths. Local ablutions over the whole body with water and some alcoholics, such as cologne, spirits of camphor or vinegar, render good service; or, again, plunge the patient into a cold, but followed immediately by a warm bath, and, as soon as the patient is returned to bed, give tea or coffee aromatized with Jamaica rum, brandy, cognac, or whiskey.

The salts of opium and pieces of ice kept in the mouth are highly recommended to control vomiting; this I have tried time and again, but a mixture of chloroform and cherry laurel water has given me better satisfaction. Sinapisms on the epigastric region do well. Cold and tonic applications, such as a solution of amm. muriate in water or vinegar,

[1] Read before the Attakapas Medical Association.

emplastrum theriacum dissolved with a sufficient quantity of sp. mindererus, tinct. cinchona, mustard and cataplasms on the lower extremities produce a decided relief. Frictions composed of 6 grains of quinine and 1 drachm of Hoffman's anodyne, three times a day, are said by Shuster to be very serviceable. Rest is the best remedy when the stomach has been crowded by drugs from the onset of the fever. All these are good auxiliaries, but yet the best is to saturate the patient with quinine by any means, ways or channels. Salol combined with quinine acts very well in tympanites. Warburg's tincture gave me little satisfaction. The combination of the sulphites and hypophosphites with quinine did not show what was expected. I have not observed that the duration and intensity of the fever were at all influenced. I then experimented with iodoform, benzoate soda, salicine, the carbolized comp. tinct. iodine, hoping to abridge the duration of the fever and reduce its temperature. I failed to realize any good, but developed, especially with the comp. tinct. iodine carbolized, gastric "susceptibility." However, unwilling to surrender all hope of finding some drug that might assist me in reducing this fever in duration and temperature, I ventured on sulphur combined with quinine, 15 grains as a dose, four times during the day for an adult, and for younger subjects the dose to be regulated according to the age. According to my judgment, by this sulphur treatment, the fever is rendered milder, the duration shorter from five to seven days, and less distress is experienced by patients thus treated than by other plans of treatment. And to be better satisfied as to the result thus obtained I requested my two *confrères*, doctors Courtney and Préjean, both skilful and learned practitioners, to try this combination of drugs, which they willingly did, and are so highly pleased that they pronounce it a double specific. It agrees with considerable evidence in favor of the view that sulphurous emanations neutralize malaria. This subject has recently been investigated by d'Abbadie who has communicated the results of his investigations to the French Academy of Sciences. It also agrees with the observations of Stanhope, N. J. I have not been able to investigate how much sulphurous emanations influence malaria around sulphur mines, Calcacieu Parish, La. Sulphur is a well known germicidal, sudorific and laxative drug.

The adynamic type is better managed by a combination of ext. cinchona, in rum, whiskey or cognac. The comatose and syncopal are treated by the same, with the addition of the tinct. nux vomica. Sulphuric ether is a good diffusible stimulant, especially when given subcutaneously. When the stomach is inactive I have found that a light infusion of the bark of cinchona and a few drops of the dilute muriatic acid do to rouse the organ; pepsin and bicarb. soda may be added. When there is prominence of grave nervous disturbance, such as delirium, subsultus tendinum, ataxia; in a word, when there is a want of unity between the nervous and organic functions, we want a drug which, by its action, will establish this fallen or collapsed unity. If recourse be had to bromide of potash or calomel associated or not with one of the salts of opium, we miss our purpose. Bromide potassium drains the "cerebral cells," which we must avoid; calomel is a "brain starver," and must be rejected. In my experience the only harmonizer in the lack of unity between the different systems is musk.

Purgatives are useful by unloading the bowels of fecal matters; they cause the intestinal fullness to disappear, and jugulate the catarrh. In choosing purgatives preference should be given to the salines; castor oil may do. After a first purgative, if the bowel has to be solicited, plain lavements are sufficient. Calomel is still prescribed by some practitioners; recent medical literature antagonizes this opinion. Clinicians, such as Meigs, Morehead, Flint, Maclean, the civil and military medical authorities of the French and English settlements, disapprove its use in this form as well as in almost all other acute affections, excepting syphilis. Calomel is accused of many evils, and I question if the gastric troubles, so frequently experienced in remittent fever, are not attributable to its abuse. Strumous subjects seem to be made worst by it. "*Mala est medicina ubi aliquid naturæ perit.*"

I do not claim to enlist malaria in the controllable or preventable list of diseases, but do believe that if physicians' dictates were not too often combated by the civilian, malarial fevers would be made less numerous by drinking pure water. As a proof of this theory I will cite the following:

Along the Carencro Bayou, the first ten miles of the Vermillion river, there are many inhabitants who drink only spring water, and, as long as these springs are not covered, malaria is hardly felt; it becomes rife after overflows, which carry vegetable and animal *débris*, and very likely deposit the malarial organism in the springs. Since 1878 or 1879 I have succeeded in having some of those planters use boiled water, and thus far they have had less medical bills to pay than those who would rather get advice from ministers of the Gospel, or such like persons.

Remittent fever recurs in the same individual either during the same summer or at any other period of life, as malaria predisposes one once attacked to any of its protean types. Milk, soups, Colden's beef ext., Ducro's elixir, and wines should comprise the dietary.

DIABETES MELLITUS; QUICK RECOVERY UNDER DIET AND STRONTIUM LACTATE.

By WILLIAM F. WAUGH, M.D.

A GENTLEMAN of sixty years, large frame, well built, full blooded, a man of wealth but still active in business, has suffered for several years with gout. He is fond of good living, but not more than usual with men of his class. During this period he has shown also such symptoms as aroused the suspicion of diabetes, and on several occasions the urine was analyzed, but with negative results. However, in June he came in with the report that for three months he had been losing flesh and strength, and passing large quantities of urine. The tests now demonstrated the presence of sugar in the proportion of 3½ per cent. He was placed upon the ordinary diet for diabetes, and given the solution of strontium lactate (Paraf-Javal), a tablespoonful before each meal. The good effect was manifested at once; and the proportion of sugar in the urine began to decline. In three weeks the glycosuria had ceased, but he presented symptoms of rheumatism. This was attributed to the lactic acid in combination with the strontium; and a mixture of sodium salicylate and colchicum was substituted, with good effect. The rheumatic symptoms subsided, but the strontium was not resumed, as no sugar could be found in the urine. The anti-diabetic diet was, however, continued in its full rigor for over two months, and even then but slight modifications were permitted. This was but little hardship, as the patient's general health was so good that he remarked that he was willing to continue the restricted diet indefinitely.

This case is remarkable for the speedy disappearance of the sugar, and the ease with which the restricted diet was borne. In regard to the diagnosis, there was the age and the habits that tend to produce diabetes, the rapid failure of health, and loss of strength and weight, coinciding with an enormous flow of urine, containing sugar in large quantities, with some other symptoms that need not be detailed.

The strontium salts have been recommended very highly as remedies in Bright's disease, but so far I have not obtained results much, if any, better than those secured by the ordinary saline diuretics; certainly no result has been manifested as brilliant as in this case of diabetes.

INFLUENZA.

By E. S. McKEE, M.D.,
CINCINNATI.

AMONG the many ingenious hypotheses advanced to account for the origin and spread of influenza, it is interesting to observe the one which, to a certain extent, approximates the doctrines of those early Italian physicians who assigned it a name which has the merit of vagueness and nescience, and for which we seem to have found no better. There seems something still to be said for an extra mundane origin for this mysterious affection. Willis[1] suggests that this disease, which visits so suddenly and simultaneously so many parts of the earth, may take its rise in the intrusion into the atmosphere of some poisonous gas of such density as to penetrate everywhere. Influenza or la grippe is, according to McKee,[2] rather better termed a pandemic than an epidemic, which passes over the earth from east to west, regarding not climate, class or society. The Indians of

[1] *London Times*, July 10. *American Practioner and News*, September 12. *London Lancet.*

[2] *American Practitioner and News*, September 26. *Nashville Journal of Medicine and Surgery*, September.

Alaska were reported[1] dying in large numbers during the past year. In Austria, 2,823 deaths from influenza were reported[2] during the epidemics of 1889 and 1890. 930,478 applied for medical relief, but of course a large number did not call in a medical attendant. An interesting editorial[3] discussed the various names of this malady, which are found peculiarly expressive in the various languages. An interesting study[4] of the various pandemics of influenza is worth recording. Lee[5] reports 1,120,000 cases in Pennsylvania during the recent epidemic, of which 7,880, or one in every 142, died. The etiology of influenza, according to Tezzier,[6] is a microbe, which he styles the streptobacillus, whose habitat is putrid mud. That Russia is its home is in his opinion due to the fact that bad drainage, filthy streets, and neglected barn-yards are the rule, a condition aggravated by swollen rivers and generally wide plains.

The depressed tone of human vitality during the influenza epidemic is discussed in a report by Coulston.[7] He was uncertain whether the lowered tone of vitality was due to the influenza, whether the European family was in a lowered state of vitality, thus being a fit nidus for the influenza germs, or whether it was the sunless, summerless general character of the year. He distinctly connected the influenza with the number of melancholic patients sent to Morningside Asylum. He believed the influenza left the nerves of Europe in a far worse state than it found them. It might be well for asylum superintendents to look into this matter. "Facts Gleaned from last year's Grippe" is the title of a valuable editorial[8] in which the statistics furnished by the Medical officers of the United States Army are collected. Stevens found its prevalence proportional to the increase in weight and humidity, and inversely to the amount of ozone and the electrical condition of the atmosphere. In view of the intense nervous depression, the too popular antipyretic sedative treatment is unwarrantable and unscientific. Fatal prostration and heart failure in grippe, are probably due more often to drugs than the disease itself. In a study of influenza as occurring in Russia, Siegfried[1] refers to the water supply of various cities and mills where large numbers were employed. It was found that those drinking artesian water were immune, or remained so until the disease was introduced from without, while those drinking surface water were readily affected.

Transmissibility[2] has received an impetus from the observation that the course of influenza was independent of, and quite opposed to, the prevailing winds. It traveled slowly in Siberia and Russia, but rapidly as soon as it reached the network of railways in Central and Western Europe. Its course was changed by the mountain ranges of Scandinavia, and it invaded Norway, not from Sweden, but from Holland and England. Again, it was deflected by the Carpathians turning its course in the channels of travel down the valley of the Danube, and ultimately following, in direction and time, the ocean routes to Africa, India and America.

In India it has shown the same peculiarities of following the railroad lines as with us. Caird[3] reports influenza as communicated to cats, and quite a number of human beings as directly infected from a horse.

Prophylaxis has been successfully carried out by Gilbert[4] by the use of quinine and arsenic. He used these remedies in a number of patients, none of whom were attacked. He observed one instance where nine children in one family were attacked with influenza, and one escaped who was taking arsenic for a skin affection. He thinks it reasonable to suppose that these two powerful antiseptics might prove inimical to the development of the microbe which probably causes influenza. It is also reasonable to expect that these drugs would fortify the system against the disease.

Immunity against influenza furnished by vaccination is reported by Gold-

[1] *Medical Record*, June 20.
[2] *Medical Record*, May 23.
[3] *Medical Record*, April 18.
[4] *Medical Record*, May 9.
[5] *Lancet Clinic*, January 24. *Journal American Medical Association*, March 14.
[6] *Journal American Medical Association*, March 21. *Gaillard's Medical Journal*, March.
[7] *Journal American Med. Association*, June 20. *Lancet*, March 7.
[8] *Medical Record*, March 28.

[1] *Deutsche Medicinische Wochenschrift*, January 15. *University Medical Magazine*, April.
[2] *Journal American Med. Association*, May 2.
[3] *Lancet*, March 28.
[4] *Lancet*, June 20.

schmidt,[1] whose observations were in the Island of Madeira, which suffered from a double invasion of small-pox and influenza. He found that no one of the 112 persons successfully revaccinated suffered from influenza, and in 98 persons in whom revaccination did not take, only 15 had any symptoms of the disease. In an isolated villa of 27 inhabitants, 12 who were vaccinated escaped, while 15 who were not vaccinated all suffered from la grippe. The doctor believes that the immunity generally enjoyed by young children in epidemics of influenza is due to the first vaccination, which has not yet had time to become dissipated.

Van Eman[2] is led to the belief that one attack of la grippe tends to a certain amount of immunity against others, but admits that this has numerous exceptions. He is strongly inclined to the opinion that cases of incipient or developed phthisis undergo rapid changes for the worse after an attack of the grippe.

The epidemic among children is discussed by Coneby,[3] who says 40 per cent. of the children of Paris were affected by this disease. Two hundred and eighteen came under his observation; 124 were girls and 94 boys. They ranged from seventeen days to fifteen years of age. He thinks the disease infectious, being diffused by atmospheric currents. Its contagiousness he considers not clearly established, although probable. In only one case was there a fatal issue.

A child born with influenza is reported by Townsend.[4] The mother had an attack January 2, lasting three days. The child was born January 9. It sneezed violently, and the same day its respirations reached 100. Second day, temperature 104° F.; pulse at least 200; respirations 150–160. He discussed, in support of his view, the case reported by Barber.[5]

The relation between influenza and pneumonia is discussed by Simon.[6] He finds that in those cases where the attack was not very severe, and the patients insisted on going out when still weak, though the temperature was still normal, there are found, on examination, sticky crepitant râles at the base of each lung. Patients walking about with these râles, and with the pulmonary conditions causing them, will be especially liable to take pneumonia if exposed to chill or fatigue. This fact will go far to explain why so many bad cases of pneumonia occur amongst men in the prime of life who have, as they have thought, recovered from slight attacks of influenza. The materials for the production of pneumonia are latent, and need only the influence of cold and exposure to develop the disease in the body already weakened by influenza.

Menstruation, as affected by influenza, is described by Mijulieff,[1] who noted that in women menstruating during an attack of influenza, the flow was more profuse and prolonged. In a case of amenorrhœa, the flow reappeared after an absence of four months; in another it appeared for the first time during an attack. No special treatment was indicated. The increased flow must be explained as due either to an acute endometritis or to the presence of pathogenitic micro-organisms in the blood, introduced through the respiratory tract. These give rise to certain vaso-motor disturbances which may lead to hemorrhages in other organs beside the uterus. It is possible that the microbes may generate ptomaines which exert a direct irritant action upon the vaso-motor system.

Hyperpyrexia is reported by Gibson.[2] Several cases are mentioned reaching 107, 108, and 109° F. One patient was saved by cold baths.

Aural complications are the subject of a report by Meniers,[3] who states they are the result of retro-nasal affections, of 57 cases 23 lasted four or five weeks. In 11 cases the lesion was unilateral, in 17 bilateral. In another series of 16 cases, 9 were unilateral and 7 bilateral, and the duration of the disease three months. Eight lasted four months, and 5 were still

[1] *Medical Record*, May 16.

[2] *Kansas Med. Jour.*, October.

[3] *Revue Mens. de Mal. des Enfants*, 1890. *American Journal of the Medical Sciences*, April.

[4] *British Med. Journal Supplement*, February, 21; *Archives of Pediatrics*, January.

[5] *British Med. Journal*, March 1; *British Med. Journal*, February 21.

[6] *British Med. Journal*, June 27.

[1] *Fiederl, Tijdskr v. Geneeskunde; Centralblatt fuer Gynakologie; American Journal of the Medical Sciences; Archives Gynecology, Obstetrics and Pediatrics*, October.

[2] *British Med. Journal*, May 30.

[3] *British Med. Journal*, June 13. *American Journal of the Med. Sciences*, February. *Med. Annales des Maladies des Oreilles*, September.

under treatment because of complication, as periostitis and mastoid inflammations. The treatment consisted of warm water, irrigation in the external canal and in the Eustachian tube, paracentesis of the membrani tympani in some cases, and in four instances thermo-cauterization of the mastoid. Ludwig[1] found that influenza induced a large number of cases of otitis media. He found otitis subsequent to influenza, sometimes a malignant and life threatening disease, which, in conjunction with pyæmia and meningitis from empyæmia of the frontal sinuses, presents the most frequent cause of death after pneumonia.

The ocular phenomena observed in the course of la grippe are described by Macnamara.[2] He has met 4 cases of optic neuritis, 3 in males. These troubles could be attributed to no other disease than influenza. Five cases of retro-ocular neuritis are reported by Epéron,[3] which occurred as sequelæ of influenza. Three cases of ocular complications are reported by Ray[4] and Hausen.[5] A case of acute retro-bulbar neuritis. Laibach[6] reports the case of a young lady who suffered from influenza with severe hemicrania dextra, whose eyelashes on the right eyelids turned perfectly white. Multiple neuritis after influenza is reported by Westphal.[7] Two cases are described in one, the first symptoms were manifest seven days after the beginning of the disease. The first patient was aged 29. He complained first of a feeling of numbness and pain in his toes and fingers, subsequently weakness of the limbs and difficulty of swallowing, abolition of the knee-jerk and the triceps jerk, retention of the abdominal and the plantar reflexes, with slight paralysis of the right side of the face. Under appropriate treatment the symptoms promptly disappeared, but the knee-jerk remained absent for several months. The symptoms in the second case were more severe, and were ushered in by an attack of urticaria. In the course of a few weeks there were general muscular weakness, paralysis of one side of the face, and paresis of the other, difficulty in swallowing and abolition of the knee-jerk, pain, on pressure, over the affected nerve trunks and muscles, wasting of muscles, both in the upper and lower extremities, and the reaction of degeneration, preceded by an increased electrical irritability. Two similar cases are reported by Homen,[1] occurring in brothers.

King[2] mentions a case in which extreme head pain, with acute vomiting and constipation, followed by squint, dilated pupils, stupor and an epileptic attack. All passed off, and the boy is now quite well. One case in which a semi-cataleptic condition occurred was mentioned. Colley[3] reports a case of Basedow's disease following influenza.

Influenza psychosis is the subject of an article by Jutrosinski,[4] who points out that no mention of a true psychosis is made until his account of the influenza as it appeared in Philadelphia in 1789–1791. Jolly, of Strasburg, observed three groups of mental diseases produced by influenza: acute delirium, delirium tremens, and genuine insanity. The etiology of influenza psychosis is the same as the etiology of mental complication in other febrile diseases, viz.: Abnormalities of the circulation, hyperæmia or anæmia of the brain, the production of ptomaines, etc. The excessive use of antipyrine or antifebrine has also undoubtedly been a factor in many cases. He thinks mental diseases are produced in individuals with nervous dispositions. Insanity can originate in every stage of influenza, however patients at the period of convalescence are most frequently attacked. All forms of mental diseases can appear; the majority show a melancholic-hypochondriacal character. Both sexes are equally attacked. Patients from twenty to thirty years of age are most frequently affected. Influenza in persons already insane produces a deterioration of their mental condition.

[1] *American Journal of the Med. Sciences*, March. *Archives fuer Ohrenhulkenunde*, September, 1890.

[2] *Weekly Med. Review*, September 19. *Le Bulletin Medicale.*

[3] *Medical Record*, June 13.

[4] *American Practitioner and News. Western Medical and Surgical Reporter.*

[5] *Schmidt's Jahrbuecher*, No. 2, 1891. *Medical Record*, November 8, 1890.

[6] *Schmidt's Jahrbuecher*, March.

[7] *Lancet*, January 10. *St. Petersberger Medicinische Wochenschrift*, 1890.

[1] *Lancet*, May 9. *Fortschritte der Medicine*, No. 9. *Finska Laharesallskape Handliungen*, Bd. xxii.

[2] *Lancet*, June 13.

[3] *Schmidt's Jahrbuecher*, No. 2, '91. *Deutsche Med. Wochenschrift*, 1890.

[4] *Lancet*, June 27.

Tenonitis following influenza is reported in four instances by Fuchs.[1] Having met with but one case previously in his experience, Fuchs could but conclude that these causes depended on the influenza. In two of the cases the pneumococci of Frankel-Weichselbaum was found in cultivations made from the secretions. One case went on to suppuration.

A case of meningitis of influenzal origin is reported by Blomfield.[2] At least this is the best description he can give it.

The digestive organs, according to Nicholson,[3] are frequently affected; vomiting is often present, especially in the commencement; diarrhœas occur in 8 or 10 per cent.; atonic dyspepsia, from which the patient may live free for years is often recalled into existence; the urinary organs usually escape complications; scanty, high colored urine is the rule, and occasionally a little albumen, but nephritis, or permanent kidney trouble would seem to be rarely, if ever, seen; hæmaturia now and then occurs, but is rarely serious. Severe menorrhagia is occasionally the result of influenza, but seems to have little tendency to produce abortion.

The treatment of influenza neuralgia by sweat baths is reported on by Frey.[4] He used simply the steam or hot air baths, and found the best results in the ordinary typical forms of neuralgia, better results being obtained in recent cases. He thinks there is a strong analogy between malarial and influenza neuralgia. He believes influenza due to a specific micro-organism, and questions whether the neuralgia occurring with it may not be occasionally in the nature of an infectious neuritis.

The following prescription is highly recommended by Palmer:[5]

℞.—Salol..... ℈iij.
Phenacetini..... ℈ij.
Quininæ salicylatis..... ℈j.
M.—Fiat caps. No. xx. One every 3 hours.

Emerson[6] has found nothing better as an antipyretic and analgesic than phenacetine, or phenacetine and salol in combination. He gave 10 grains of phenacetine, or 5 grains of phenacetine and 5 of salol, or 2.5 grains each every three hours. It is rarely necessary after that time.

Phenacetine is warmly recommended by Clemow[1], who has used it in from 4–10 grains. The second dose is given an hour after the first, then repeated every four hours if the patient is not relieved. Similar results are reported by Henry.[2] Laffont[3] advises as a rational treatment of influenza gentle fumigations, diaphoretics and revulsives, strong tonics.

That influenza is a paresis or partial paralysis of the pneumogastric nerve, depending probably on such a sudden change in the atmosphere as involves an increased expenditure of force in maintaining circulation and respiration, is the idea advanced by Morris.[4] Hence follows the phenomena of heart failure and pulmonary congestion which we too often witness, or the gastro-intestinal troubles, or the intense neuralgias. He finds from a logical sequence that the best remedies are strong excito-motor stimulants, chief among them strychnine, caffeine, alcohol and ammonia. Since he adopted the above views, and treated his patients with 5-10 drop doses of tincture of nux vomica every three or four hours, he has often been surprised at the promptness with which they rallied, and the almost unfailing success of the method. He strongly urged his means of treatment, especially with patients below the par of vital activity.

A single inhalation of a 2 per cent. solution of ichthyol has produced great relief in the hands of Lorenz.[5] A stream spray apparatus was used, and it was repeated twice a day for twenty minutes at a time. In addition to this, ichthyol was ordered internally in the form of pills, containing a grain and a half each, one to five being taken daily; also a vessel containing a 2 per cent. solution of ichthyol was kept in the room, and was made to boil from time to time by means of a spirit lamp under it. In almost every case the symptoms are said to have subsided entirely in two or three days, but if

[1] *Wiener Klinische Wochenschrift*, 1890, II. *American Journal of Med. Sciences*, January.
[2] *British Med. Journal*, June 13.
[3] *Deutsche Med. Wochenschrift*, March 19. *University Med. Magazine*, July.
[4] *British Med. Journal.*
[5] *American Practitioner*, 1890. *Canada Medical Record*, August, 1890.
[6] *Medical News. Canada Medical Record*, August.

[1] *British Med. Journal*, June 27.
[2] *British Med. Journal*, June 13.
[3] *Medical Record*, April 11.
[4] *Journal American Med. Association*, Jan. 3. *Transactions American Academy of Medicine.*
[5] *British Med. Journal*, May 30.

the treatment were left off then the cough and the running at the nose were liable to recur.

Bruce[1] sends the patients to bed, provides good nursing, warmth and rest, feeds them freely, fluid diet highly nutritious and stimulating. For the first few hours order 10–15 grain doses of salicylate of sodium, as soon as the pain is gone drop that, and put the patient on free doses of quinine or cinchona.

Wallian[2] considers an efficiently managed Turkish, or Turko-Russian bath at the onset, one of the promptest measures at command. It relieves congestion, causes rapid elimination, and equalizes the circulation. Few patients are too weak to bear this measure. The sick room should be free from curtains, plush furniture, etc., should be large, airy, and should be perfectly disinfected with per oxide of hydrogen, which should be thoroughly sprayed about the room every two or three hours. It not only disinfects, but liberates free oxygen in an extremely active or ozonized condition. Add to this free and frequent inhalations of pure oxygen to the extent of 15–25 gallons per day.

THERAPEUTIC NOTES FROM THE FRENCH.

[By (E. W. Bing, M.D., Chester, Pa., Translator.)]

In an interesting paper on "The Depopulation (or to speak more correctly, the feeble growth of population) in France," M. Le Roy, in *La Medicine Moderne*, says that on the one hand the number of births diminishes in a constant manner, and on the other hand the ratio of deaths remains excessive. He gives statistics proving that France is retrograding in the matter of births, while the other European countries are advancing; and that in 1890 there was a diminution of 38,446 persons in France, the excess of births over deaths being only 2 per thousand. The reasons are various, partly on account of wars, revolutions, epidemics, but principally on account of celibacy both among the clergy (voluntary) and in the army (enforced). The marriages only average 7 per thousand. In addition to being rare, marriages are not fruitful, and are so voluntarily, and among all classes for economic reasons. Only among the lower classes are births at all numerous, and among these the children are so badly cared for that they are carried off within the year. In the last ten years France has lost 500,000 subjects from abortions, provoked or otherwise, and still-births. The author proposes as remedies: Reform of the marriage laws and those of succession; prosecution for adultery, even outside of the home (prostitution?); shortening of the term of military service, conditionally on marriage within a limited time. A rebate of taxation proportioned to the number of children in the family, where the parents have less than 6,000 francs income, and an increase of taxation on bachelors having more than 3,000 francs income, and some other regulations relating to nurses, lying-in-hospitals, etc. The subject is to receive the attention of a commission.

—*La Medicine Moderne.*

Inhalation of Menthol in Tracheitis.—For three years past Barbon and Martin have used warm inhalations of menthol in tracheitis. The menthol is placed in a flask with two tubulures and then placed in a water bath. The menthol (melting at 38° C. and vaporizing at 45°C.) is inhaled. Only five or six inhalations can be made at the one sitting. The menthol in cooling is deposited on the mucous membrane.

Indications: Larygo-tracheitis with irritative cough. Laryngeal tuberculosis is a contra-indication, in these cases intra-tracheal injections of menthol do best.

—*Jour. de Med. de Bordeaux.*

A Leech in the Larynx.—Dr. Aubert (Algiers). In a communication to the Laryngological Society of Paris, the doctor recounts a case in which a woman of fifty-seven years had swallowed a microscopic leech in a glass of water. It was only after a week of suffering from asphyxia and hæmopstysis that it was dislodged, which happened in this way, Dr. Aubert was making a laryngological examination when the leech got into the larynx, necessitating tracheotomy. During its stay in the throat the annelid had attained the volume of a pencil.

—*Jour. de Med. de Bordeaux.*

[1] *Medical Press and Circular*, November, 19, 1891. *New Orleans Med. and Surgical Journal*, January. *Gaillard's Med. Journal*, January.

[2] *Medical News*, April 25.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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PHILADELPHIA, October 8, 1892.

ANOTHER typhoid fever number will be issued soon. Will our friends whose articles were belated for the last issue, kindly send them to us as speedily as possible?

DR. WOODBURY has called attention to the value of papoid in digesting starches, and all the constituents of a hearty meal. This valuable paper will be found in full, with illustrations, in any of the journals that advertise papoid.

DR. ELMER LEE reports marked success in the treatment of cholera by irrigating the colon with peroxide of hydrogen solution. The method has been adopted for six months' trial by the St. Petersburg hospitals, in cholera and in dysentery. So says the *New York Herald.*

WE must not crow until we are out of the woods; but it looks as if the health officers of New York had earned the undying gratitude of the whole country by delivering it from the cholera scourge. In an effete monarchy such services would be rewarded by titles, pensions and estates. Here the only recompense they are likely to receive is the virulent hostility of those who think they could have done the thing much better themselves.

JOHN L. SULLIVAN is now said to be a paralytic. By the long continued alcoholic soaking to which his tissues have been subjected, the connective tissue elements have become hypertrophied, the increased growth causing atrophy of the muscular fibrillæ. The magnificent development of muscle that won him so many victories has thus given place to a spurious hypertrophy; the bulk remaining, the consistency even increased, but the force has imperceptibly diminished, until he again exemplifies the aged simile of the oak of fair appearance, but rotten at the heart.

DIPHTHERIA has increased in Philadelphia to such a degree as to attract the public attention. The Board of Health is taking unusual precautions to check the spread of the disease, and with very good success. This work would be furthered greatly if physicians were prompt in reporting their cases. Too often, when the official visit is made, it is found that several members of a family have been infected successively, and that the disease has extended to the neighbors. That this and other infectious diseases have not gotten into the schools is due to the care exercised by the teachers—a good work that is apt to go unnoticed because people have come to consider it almost as a matter of course.

PEROXIDE IN DIPHTHERIA.

FRANCIS H. WILLIAMS (*Boston Medical and Surgical Journal*) has been testing peroxide of hydrogen in diphtheria. He employed fifty to two hundred volume acid solutions, finding this most efficient and stable. He applied this locally by means of a spray apparatus and syringe of his own devising, making the applica-

sions one to three times daily with the syringe, spraying with the fifty volume solution once every four hours, and douching or spraying the nose and pharynx with the fifteen volume solution as a prophylactic. The stronger solutions should be kept in a refrigerator, and even then lose some strength. The results appear to have been favorable, as "no case that came early to the hospital died," but the author does not say how many were treated, or how many died. His conclusions were:

1. The peroxide of hydrogen has the unique and necessary quality of disintegrating the membrane and thus rendering the bacillus accessible. As it only attacks dead organic matter the healthy tissues are not lacerated, as is the case when mechanical means are used to remove the membrane.

2. The acid peroxide of hydrogen solutions are an effective germicide against the bacillus of diphtheria, and not toxic to the patient.

Letters to the Editor.

JAMBUL IN DIABETES.

I WISH to thank you for a suggestion from you which I saw some months ago. You said you had found jambul good for saccharine diabetes. I had a case, and was grasping for straws. Got some of Parke, Davis & Co.'s. The symptoms commenced to disappear at once, and soon the thirst, excessive diuresis, and the many other unpleasant symptoms were gone. Since last month has taken no treatment, and eats whatever food she wants. It should be better known by the profession. V. E. LAWRENCE, M.D.

HALSTEAD, KANSAS.

QUANTITY OF MORPHINE TAKEN BY HABITUÉS.

IN the September 24 issue of THE TIMES AND REGISTER, a morphine case is published by Dr. J. G. Page, of Elwood, Neb., which seems to have rather "startled" him at the amount of morphine the human system can be educated to endure. He will, perhaps, be surprised to learn that his is only an average case whose daily ration of morphine is frequently met with. I have a case under my care of double addiction of morphine and cocaine, whose daily ration was 60 grains of morphine sulphate and 70 grains of cocaine hydrochlorate, administered hypodermically, whilst I have had quite a number of cases ranging from 20 to 40 grains a day, and I have no doubt other specialists in this line could record cases even exceeding in quantity the one I cite.

I had a laudanum case, whose daily quantity was 16 fluidounces, and the celebrated De Quincey, in his "Confessions of an English Opium Eater," took laudanum equal to 58 grains of morphine per diem.

The neatness and tidy habits of the patient at this stage of her malady is, however, exceptional, the reverse being the rule to which, I predict, she will come to be no exception.

One other point, amenorrhœa and sterility are almost constantly present during morphine habituation, but menstruation (in those young enough) is sure to return on discontinuing the opiate, and usually the sterile become pregnant.

STEPHEN LETT, M.D.

GUELPH, ONTARIO.

[There is one point we would like to call attention to, viz.: How much morphine was in the drachm vials? Sixty grains, nominally, but really much less. We once took pains to weigh the contents of several dozen ⅛-oz. vials, and the largest quantity in any one was 32 grains. The firm that put up the drug stated that the quantity for each bottle was not weighed, but one pound divided among 128 vials. Nevertheless, somebody else got on an average, one-half of the morphine we paid for.—W. F. W.]

SYNOVITIS OF KNEE JOINT.

I HAVE been confined to the house now six weeks with an injured knee. The history of the case is as follows: The 18th of July I struck the patella of my right knee against the corner of my book-case. The joint annoyed me but little at the time, but some twenty-four hours afterwards it began to pain me. I rubbed on some liniment, and kept on doing my regular work. It pained me more or less for two weeks but not enough to cause me to stop work. Finally, the knee began to swell and the pain became so

severe that I had to stop my practice. During the days it pained me while I kept at work there was only a little swelling on either side of the patella, and along the tendon it was simply a little sensitive on pressure. The knee has not been swollen at any time to exceed a half inch more than normal. At the present time there is considerable pain on the inner side of the joint, and it is swollen some on that side. There has been considerable crepitation upon moving the patella; not so much now. I can bend the knee considerably without much pain, but the least twisting of the foot elicits pain, more especially on the inner side of the joint. During the six weeks that I have been laid up with it, four fly blisters have been applied, with no appreciable benefit. The knee has been kept at rest all the time. For two weeks have been wearing a plaster Paris cast to keep the joint immovable, but at present have removed it, and am now in bed with the leg laid across a pillow. Am applying tr. iodine every day, and keeping the joint wrapped up in cotton wadding, and bandaged as tight as can stand it. I have had no fever, and am perfectly well and healthy other ways. Now, doctor, can you suggest anything that will be of any benefit to me in the way of treatment? I am very tired of this confinement, and all that has been done seems of little use so far. You will confer a great favor by any suggestion that will help me out. F. T. FIELD, M.D.

ELROY, WIS.

[Open joint under strict antiseptic precautions and wash out with peroxide of hydrogen solution, until the suppuration ceases.—W. F. W.]

CONSUMPTION IN THE "EASTERN SHORE."

I WILL endeavor to give you the facts, as far as my experience will permit, from a practice of two years and nine months in Crumpton, Queen Ann's county, Maryland. As a health resort for consumptives, I am very adverse to recommending it, though not wishing to be contrary to my brother physicians, as my personal experience will prove.

Crumpton is situated partly in Queen Ann and part in Kent county, on River Chester, twenty miles from Chesapeake bay and sixty-five miles from Baltimore, on the Eastern Shore. I will give a brief history of cases that came under my charge at some stage of the disease:

1. D. B., young man, about twenty-five years of age. Saw him first in February, 1887. Mended nicely and got around during summer, but died the following September. Had been coughing about two years. He also lost two sisters; both grew to be young ladies in Crumpton; hereditary cases.

2. Miss L., young lady, about twenty years of age; contracted a cold which settled on lungs, producing phthisis pulmonalis. She lived a few months over one year. Hers was acquired; none of her parents, brothers or sisters ever died or had any lung trouble.

3. C. R., colored man, about sixty-five years of age. Contracted pneumonia; made good recovery, but never regained his strength as before. This I attributed to his age. This occurred during the spring of 1887, and the following fall he took another bad cold, which settled on his lungs, and he died the following spring, 1888, with catarrhal phthisis. There was no heredity in this case.

4. L. C., young colored woman; single; pregnant; twenty-one years of age; caught cold; settled on lungs; had several hemorrhages from lungs; developed phthisis; was delivered of child at proper time, and died a couple of months after. This case was acquired.

5. Mrs. C.; married; had three children, two boys and a girl, all healthy. Developed consumption, and died nine months afterward.

6. Mrs. S.; married; had five children; taken with cold; settled on lungs; was sick a little over one year, and died with consumption.

7. C. T., my driver; a boy; sixteen years of age; colored; took cold after he left my employ; settled on lungs; lived about nine months; died of catarrhal phthisis. This case was acquired.

I could name a number of cases more that died of hereditary consumption; one of them a brother-in-law, and one a sister-in law. They lived at Kennedyville, Kent county, Maryland. I think I could name a dozen in Crumpton and vicinity, but all did not occur during my stay there. All I have mentioned did; of these, four lived in Crumpton, and three in the country.

Queen Ann county is rolling soil; is generally light and sandy; will produce all kinds of fruit and vegetables in abundance, and is easily tilled.

Kent county is a clay loam, and is very productive in wheat, corn, oats, etc., but not so well adapted to fruit. Still, all kinds are cultivated and raised in quantities.

A great many of the population of Crumpton, which numbers about four hundred souls, follow fishing and oystering for a living.

I can refer you to Dr. Shepperd, Crumpton, Queen Ann county, Maryland, for more and better information concerning this most important and vital question. He has been practising medicine there about twenty years, and should be good authority. DR. FANNING.

Book Notice.

INOCULATION A PREVENTIVE OF SWINE PLAGUE With the Demonstration that the Administration of the Agricultural Department is a Public Scandal. An exposure by FRANK S. BILLINGS, M.D. Printed and published at the expense of the author. Cloth, 4to. pp. 321.

Dr. Billings presents his view of the controversy in full. Those interested in the subject can, we presume, obtain the volume by communicating with him.

The Medical Digest.

METHODS FOR THE PREVENTION OF CHOLERA.—The *London Lancet* is convinced that quarantine as a main reliance against cholera is misleading. Of the Oriental nations, those relying mainly upon quarantine are the ones who suffer most from preventable diseases. The United States have made great progress in public health, and it may be that some system of quarantine will best meet the possible importation of cholera there, but its educational effect upon the people is of the worst. A nation should be educated to a higher standard, namely: Quarantine is not a safe reliance, but that pure air, water, and soil are more to be trusted. The moment quarantine is resorted to there are endless attempts to get ashore despite of all regulations. The people of a country, in violently frustrating these attempts, are only acting in the direction indicated by the Government when it authorizes a reversion to the ancient, cruel, and useless system known as quarantine.

MEDICINE AND THE ORIENTALIST CONGRESS.—The *Lancet* regrets that at the Ninth Oriental Congress just concluded at London, the history of the healing art in the East was practically a sealed book. In opening its proceedings its President, Max Müller, said the sciences of language, mythology, religion, even the science of thought, all have assumed a new aspect through discoveries of Oriental scholars, who have displayed to us the historical development of the human race as a worthy rival of the natural development presented to us by the genius of Darwin. The *Lancet* continues: To this river of inductive truth there were many tributaries, such as the departments of anthropology, geography, and the cognate sciences. The science perhaps the most ancient of all, the one that reflects in its successive stages the contemporary standpoint, moral and intellectual of the human race was ignored, certainly not for the lack of subject-matter as, *e. g.*, Egypt alone teems with problems of medico-historical interest, the solution of which must shed light on the progress of humanity. The healing art of the Indians bristles with unsolved problems, containing in their solution the key to much of the Hindoo civilization. Concerning the medical history of these countries, as also that of China, this Congress was a disappointment. A dip into any history of medicine, from Puccinotti to Puschmann, will afford in the poverty of detail, in the wealth of hypothesis as to the healing art of these nations, the proof of how little Oriental scholarship has done in this regard. It is to be hoped that at their next meeting the Orientalists will have, on the medical side, a better record to show.

THE CREATION OF THE OFFICE OF PUBLIC SCHOOL DENTIST.—Mr. Denison Pedley suggests that all public schools should have a paid dental surgeon, who should periodically examine all the children and perform any operations—conservative or radical—that are needful, and that a record should be kept of the same. These views accord with ours, and are gaining ground generally, as ex-

emplified by the recent appointment of a dental surgeon to the central London district. The record of cases, if carefully kept, could not fail to be of scientific value.—*The Lancet.*

International Medical Congress of 1893.—The Organizing Committee has decided that the inauguration of the Congress shall take place in Rome on September 24, 1893, and that its labors shall conclude October 1 following. The adhesions received by the committee from all the chief centers of medical education throughout the world have exceeded its expectations. Further information can be had by addressing La Secreteria Generale del XI Congresso Medico Internazionale, presso la Clinica Medico, Ospedale di Pammatone, Genoa.—*The Lancet.*

Language of Animals.—The chatter of monkeys can be made intelligible to the human mind. Among these animals themselves it is, according to Prof. Garner, not only intelligible, but understood. Their utterances indicate a purposive character. Simian speech is associated with a form of delivery or address exciting responsive actions. The sounds uttered by monkeys in one quarter of the globe, when reproduced by the phonograph, were recognized by animals of the same species in another. If Prof. Garner's researches indicate anything, it is the probability that the songs of birds, the hissing of reptiles, and the whole and varied catalogue of sounds among the lower creation represent so many stages in the development of language.

Sensory Symptoms in Visceral Disease.—Dr. James Mackenzie, in the *Medical Chronicle*, cautions against reception of vague statements from the patient, and exclusion therefore of the complaints of neurotic subjects from great amount of consideration. In diagrammatic form he represents the areas over which pain is commonly felt in disease of the heart, of the stomach, œsophagus, liver, intestines, uterus and bladder.

Ample confirmation of the correctness of his facts would doubtless be given by most clinical observers. A matter of interest is that the tenderness often associated with the pain is seated not in the affected organ or in the skin itself, but rather in the subcutaneous tissues; and, what is, we believe, a new point, there is often tenderness over the vertebral spines, corresponding to pains in the back, associated with visceral disease. These areas of spinal tenderness embrace from the first to the fourth dorsal spines in cases of cardiac pain; from the fourth to the eighth spines in gastric pain, and from the eighth to the eleventh in hepatic pain, the area of uterine and rectal pains being found over the sacrum.

Cholera and Cremation.—From the substance of a letter in *The Times* by Sir Spencer Wells, wherein he asserts that the destruction of the bacilli found in the bodies of cholera patients has long been regarded by most bacteriologists as one of the most necessary measures to prevent the spread of the disease; and there can be no doubt that fire is the swiftest and most effective mode of destroying the bacilli.

It is conceded by an opponent of universal cremation, that if it were limited to the victims of epidemic diseases, whether cholera, scarlet fever, typhus fever, or diphtheria, the great objection to cremation, *i. e.*, the medico-legal one, would be removed.

The Second International Congress of Physiologists has this year held its sitting at Liege, with Halmgren (Upsala) as President, in the University. The Congress terminated September 1 with a banquet. There were about one hundred European physiologists at the Congress. It was agreed to hold the next Congress in 1895 at Berne, under the presidency of Prof. Hugo Kronecker. The general secretaries are: for the French language, Prof. Arloing; for the German language, Prof. Exner; for the English language, Prof. Sherrington.

Dr. Kortneff shows in the Russian *Ophthalmic Review* that the epidemic of ergotism recently raging in the Viatka district was due to the use of diseased rye in the making of bread. Of the patients, some had persistent impaired vision, and these were found to have cataract not distinguishable from the ordinary senile kind. Maturation took place in from three to twelve months, and was especially rapid in the case of children.

Dr. Bush, of Dorpat, has shown that turpentine has the power of hindering to a certain extent the toxic action of phosphorus. In addition to the use of turpentine in cases of acute phosphorus poisoning, he advises the use of emetics and the washing out of the stomach. He estimates that doses exceeding the lethal dose by 0.001 grm. per kilogramme of body weight may be rendered non-fatal by the means of turpentine.—*The Lancet.*

Haffkine's Method of Inoculation as a Protection Against Cholera.—In the course of his researches on the cholera vibrio M. Haffkine has met with facts tending to remove the difficulties that have prevented the general acceptance of this microbe as the cause of cholera. He has succeeded in reproducing in rabbits a disease resembling human cholera by a simple and ingenious process, where all previous attempts to reproduce cholera among the animal world had failed. The blood serum of the rabbit kills the cholera microbe. He has succeeded in acclimatizing the vibrio, so that at length it is completely unharmed by the bactericidal action in question. If a small quantity of a culture in rabbit's serum of these acclimatized vibrios be injected into the veins of a rabbit the animal will succumb, showing symptoms similar to those of typical cholera. During the collapsed condition that precedes death cramps are frequent, and on *post-mortem* examination the intestine is found filled with typical "rice water" secretion. Generally the symptoms appear in a few days after inoculation. It is well to say that the secretion just mentioned and the mucous membrane of the intestine contained vibrios in large numbers.

The first step towards obtaining a protective vaccine was the preparation of an abnormally virulent form of microbe. M. Haffkine has done this by passing the microbe through a series of guinea-pigs. The exudation from the peritoneum of the first guinea-pig is injected into the peritoneum of the second, and so on through the series, certain precautions being necessary in order to maintain the series, as it is found that with each successive exudation the microbes lessen in numbers, and finally will not be sufficient to kill the next guinea-pig in the series. In avoiding this result it was found that the exudation of a large guinea-pig was copious, though the microbes were few compared with the exudation from a small guinea-pig, which was small in quantity, but rich with microbes. Apparently the quantity is the measure of the power of resistance possessed by the individual. With this clue M. Haffkine inoculates a guinea-pig into the peritoneal cavity with cholera vibrios from an agar culture. On its death the peritoneal exudation is removed with a pipette, placed in a test tube, and left for some hours subject to the temperature of the room. If it is abundant, it is then injected into the peritoneum of a small guinea-pig, and the converse process is used if the exudation of the first of the series is small. On the death of the animals in the former case, the liquid injected will be found to be concentrated. By the aid of these precautions the cholera virus can be passed through an indefinitely long series. From each exudation in a series an agar culture is made for the purpose of controlling the purity. Each successive culture will be found more virulent than its predecessors; also the guinea-pigs in the series die in shorter and shorter times after the injection. Between the twentieth and thirtieth passage the maximum degree of virulence is apparently reached. Agar culture made from such an exudation retain this degree of virulence. This virus seems to be twenty times as virulent as the ordinary form of the microbe, from which it differs in that it kills guinea-pigs when injected in small doses into the depth of the muscular tissue of the thigh. If, however, it is injected under the skin, this virus *exalté* does not kill the animal; it produces a local malady. After a few hours an extensive œdema developes. This leads to necrosis of the tissues involved. In a few days the necrosed mass falls off, leaving a granulating wound. This at length heals up. The animal is now immune against inoculation with cholera in any way whatever.

The process of attenuation of the virus by means of culture in bouillon, through a series of flasks of this medium, cannot be given at present. After a series of passages from flask to flask the microbes are so altered that the power of producing necrosis in guinea-pigs is lost, even when injected under the skin in exaggerated doses. They still retain the power, when injected into the peritoneum of these animals in a certain quantity, of killing. A

certain quantity injected under the skin of the guinea pig renders it eventually immune against the cholera microbe in whatever way it may be inoculated. M. Hoffkine by his method also renders rabbits and pigeons immune. Finally he tried the effect of these inoculations on himself, and subsequently on seven other gentlemen.

Regarding these inoculations the œdematous swelling developes with startling rapidity, but is unlikely to lead to inflammation that is dangerous. The cholera microbe is incapable of producing pus. Knowing these facts we did not abstain from our occupations. All the gentlemen experienced only trivial elevations of temperature and discomfort. In a few of the cases transient constipation occurred. In one case diarrhœa had been present for some days before the first inoculation, and vanished soon.

It is possible that for inoculations on human beings, it may be well to commence with sterilized (by heat) cultures, in order to diminish the discomfort produced by later inoculations with the living virus.

M. Haffkine prefers cultures on agar to those in bouillon. The latter contain far more soluble poisons than the former, and there is reason to think that it is the less readily soluble substances contained in the bodies of the microbes that are concerned in the production of immunity.

How can success in producing immunity against "laboratory infection" of a guinea-pig, justify us in concluding that we have obtained immunity against "natural infection" of a human being? In the first place, the fact that there is a difference—it may be great—between artificial and natural infection, though suggesting a source of error, is not of itself reason for thinking that immunity against the one is not immunity against the other. If any animal has been made immune against the cholera microbe, it has always been found to be capable of resisting it, in whatever way it may have been introduced into the body. If a human being has been made immune against the effects of the cholera microbe when injected under the skin, analogy suggests that he is immune against the same microbe when it enters the system by the natural way, whatever that may be. The effects of a subcutaneous inoculation of the attenuated cholera microbe on a human being are now well known. There is an extensively and rapidly-developing œdematous swelling and redness, which vanishes gradually after a lapse of several days. A small, hard nodule appears at the seat of inoculation. These changes may be regarded as a distinct character of the cholera inoculation. The fever and nausea (*malaise*), cannot be so considered; probably a similar injection of any microbe would produce a similar elevation of temperature. Consequently, the presence or absence of a "local immunity" in a human being subjected to Haffkine's treatment, can be tested by a repetition of his first injection, namely, that of the attenuated virus. M. Haffkine performed this experiment five weeks after his inoculation, with the strengthened virus. After the injection a swelling rapidly developed, and as rapidly disappeared. It had almost gone in one day, leaving no hard nodule, as had been the case in the previous inoculations. It is to be remembered that the œdema caused by the first inoculation took nine days to disappear. As anticipated, an ephemeral rise of temperature occurred, but this happened with the guinea-pig that had received the same repeated inoculation, and that had been proved to be immune against cholera on several occasions.

An objection remains. Dr. Cunningham has isolated several distinct and permanent varieties (species) of the cholera microbe. Will immunity against one of them confer immunity against the other? M. Haffkine's vaccines have been prepared from a cholera microbe of Indian origin, and his inoculated guinea-pigs have shown themselves immune against this race. M. Haffkine concludes that a guinea-pig prepared by his method is just as refractory to one microbe as to the other.

A priori, it seems that an inoculation with the *virus exalté* confers a more lasting immunity than a slight attack of cholera. In human beings the immunity can be tested at times by a subcutaneous inoculation. In the event of a lasting œdema occurring from this test inoculation, it can form the starting-point for a repeated treatment. There is no reason to think that this method can be a source of danger to other individuals. On the other hand, there is reason to believe that the microbes injected are quickly destroyed in the body, most probably *in*

situ. Forget not, that probably after the first inoculation, less probably after the second, there may be a temporary decrease in the power of resisting the entry of the cholera microbes. In three or four days from the injection the power of resisting the attack of cholera microbes returns to the normal, and after that time continues to increase. It seems, therefore, that these inoculations should not be practised in a given place during an epidemic of cholera without great caution. Before a definite conclusion on this point, further experiments on animals are needed. The evidence shows that M. Haffkine's method of inoculation is not accompanied by any great disturbance of health, and that it can be practised on human beings with safety. The fact that it affords immunity against cholera in any form, in animals of such different organization as guinea pigs and pigeons, gives reason to think it may produce equally good effect in human beings, but time must elapse before evidence is attainable of value on this point.

—E. H. Hankin in *British Med. Jour.*

Experiments on the Relation of Phagocytosis to Erysipelas were performed by taking minute fragments of sterile decalcified sponge, soaking them in a broth culture of the S. erysipelatio, and then inserting them under the skin of rabbits. After a time the sponges were withdrawn, and the contained exudation examined, resulting in the fact that phagocytosis was observable in direct relation to the virulence of the original culture.

With a culture capable only of causing very slight inflammation in a rabbit's ear, phagocytosis was almost complete in twenty-four hours, and nearly all cocci were already enclosed in cells.

With a more virulent culture phagocytosis was still observable, but many cocci were not enclosed, and those cells which contained cocci showed signs of having suffered greatly in the fight.

With a very virulent culture—one which would kill a rabbit in two days—the exudation showed very few cellular elements, but extremely numerous free streptococci (more often diplococci or single cocci). It appeared, therefore, that phagocytosis succeeded only when the virulence of cultures was not great, and that some other influence most probably came into play before this process could be effective. It seemed wrong to assume that phagocytosis played no part in ending the inflammation; for with cultures of slight virulence the process could be observed within a short time of the inoculation, and in guinea pigs, which were very resistant to erysipelas, all the cocci, as if engulfed in a very short time, and practically no local mischief was developed.

—T. J. Bokenham, in *Brit. Med. Jour.*

The Cholera in Berlin and in the Municipal Hospital.—The evening of August 24, a patient was brought into the hospital. Dr. Guttmann, who was, at the time, away, saw him first on the morning of the 27th. To use the doctor's report: The patient didn't impress me as being very sick; his symptoms doubtful, vomiting, great diarrhœa, and no cramps in the legs. The bacteriological examination showed common bacillus. He is now convalescing.

Case II.—At 10 A.M., August 27, a woman (just arrived from Hamburg) was brought in. Four hours later, asphyxiation set in, with slight pulse in the radial arteries, cyanotic hue of the extremities, cold skin, and temperature (at night) 33.4″. After many hypodermic injections of Koch's solution of salts, pulse returned. Three days later, August 30, typhoid cholera developed, ending fatally by evening. Dissection showed only moderate anatomical alterations of the mucous coat of the intestine. This coat in the small bowel was here and there slightly swollen, and its redness only slight and not general. Contents of the intestine somewhat copious, thin, yellowish, and the pericarpium (Rindensubstanz) of the kidneys greenish yellow.

Case III.—At 12 M., August 20, a wharf laborer was brought in nearly asphyxiated. At 7 A.M. he had drank much river (Spree) water, being warm with his work, and was very soon sick. Subcutaneous injections of Koch's solution restored the pulse for a time, but it disappeared again. Severe collapse and cyanose made all efforts fruitless. Nineteen hours from the first attack he expired.

The fourth and fifth cases expired.

I omit here a statement of the fourth, fifth, and sixth cases, and of the dissection of the fourth and fifth.

In all of the six cases, bacteriological examinations of the evacuations of the intestine showed comma bacilli. They were in the flakes of mucus (Schleim-flöckchen) of the rice-water stools and in the colored stools. These comma bacilli have the forms specified by Koch. The corpses presented the typical appearance, namely, the inflammation in greater or less degree of the mucous coat of the small intestine, and more rarely in that of the large bowel (Dickdarm), the inflammation of the glandular structure (Drüsigen Apparate) of the intestine, and the inflamed alterations of the kidneys. All these alterations of the mucous membrane of the intestine now appear again as I saw them, by means of one hundred dissections during the epidemic of cholera in 1866. See my report in *Wochenschrift*, No. 38.

The therapy in this hospital is directed against heart weakness. Also, hypodermic injections of camphor and ether is resorted to, besides administering, internally, alcohol, strong wine, tea, etc., the placing of hot bottles in the bed, and quenching of the patients' thirst with pieces of ice.

For the injections use ⅔ Prof. Koch's solution. During the injections keep rubbing the locality; the fluidity, which soon shows itself by the puffing of the skin, will be spread in the tissues thereby, and the swelling of the skin lessened. The best places for the injections are the subclavular or the *regio iliaca*. If the good effects apparent from the first do not combine, repeat them. In one case I injected 5–7 liters of the fluid in twenty hours.

Herewith I close my report on the six cases of Asiatic cholera. There are now in the hospital a great number of Brechdurchfullen and a number of cases of cholera nostras—total, eighty-two. For the present, the hospital is devoted solely to cholera cases.

The authorities of Berlin are very active in the use of the means of disinfection and for warding off the epidemic. For this reason, and also because of the time of the year, I think the plague cannot extend itself here.

—*Berliner kl. Wochenschrift.*

Hæmatemesis of Young Women.—Henry Handford says it is the anæmia, the constipation, and the feeble heart which require attention; and the successful treatment of these removes the malnutrition of the vessels, the high vascular tension, and the venous remora, which are the three most important causes of hæmatemesis of young women.

It is possible to restrict the dietary too much. But how are to be distinguished the cases where the blood is poured out from the surface of an ulcer from those where no visible ulcer exists, though certainly there must be a breach of continuity for hemorrhage to arise? The best guide to the dietetic treatment is the state of irritability of the stomach as indicated by pain and vomiting. Neither of these symptoms is necessary consequence of gastric ulcer. They indicate either an inflamed ulcer or surrounding catarrh. If these two conditions are absent, a case of gastric ulcer may be treated safely on the same lines as one of hæmatemesis arising apart from the ulcer. Hyperacidity, which greatly favors the production or continuance of ulceration of the stomach, is generally indicated by a feeling of pain about an hour after meals.

Hyperacidity should be met with alkalies. Light food, finely divided, and moderate in quantity can be safely taken, even in gastric ulcer. In absence of abundant nutrition, quick cure is out of question.

Where hæmatemesis is due to anæmia, and the anæmic dilatation of the right side of the heart, leading to over-filling and congestion of the veins of the stomach, digitalis is unnecessary so long as the patient is kept strictly in bed; but so soon as the patient is permitted to get up, unless the tricuspid murmur and the dilatation of the right ventricle have disappeared during the prolonged period of rest and the treatment by iron and asperients, digitalis should certainly be added.

Tincture Hemostyptica.—Dr. Kish, of Prague, Marienbad, speaks favorably of tinctura hæmostyptica. He employed it with twenty patients, mostly women with climacteric bleeding of the uterus, which, by the unusual duration or intensity of the menstruation and irregular appearance of same, showed nothing of abnormal character in genital apparatus save chronic excessive congestion of blood (stauumgshyperänemia). From two to five days, except in a few cases, sufficed to effect a stop to the bleeding.

As favorable effects resulted from the use of it for two to three days in cases of

bleeding of the uterus in women with endometritis and metritis, where the uterus from mangelbrafte Rückbildung in the posterior part permitted the running back of the blood flow. Also in a very important case of uterine tumor (uterus myom) in a virgin, which caused excessive bleeding (unaffected by hydrastis canadensis), the tinctura hæmostatica stopped the flow. No success followed its use on anæmic women with non-typical bleeding.

In every case twenty drops of the tincture were given three to four times a day, sometimes oftener. The tincture contains no active agent except ergot.

Psycho-Therapeutics. — George M. Robertson has the following in *The Lancet:* A lady in the last stage of cachetic exhaustion from cancer, tried Count Mattei's cancer cure. With the first dose all the racking torture disappeared, and she continued the remedy the last two weeks of her life, with great relief from pain. To this woman, whose hope of recovery had been extinguished, there appeared, as it were,. a heaven-sent remedy, and she clutched at it with a faith born of despair. The result showed, as regards subjectivity, freedom from suffering, though the fatal disease was unaffected. The first thing to note is that the agency employed had great respiration just as in the somewhat analogous cases of magnetism, of consecrated relics, springs, etc.

Of the semi scientific foundation granted to animal magnetism, the undefined mysteries attaching to it and to electricity in the popular mind, and of the reputed power of Count Mattei's remedies, I shall not dwell upon here. The main point is the subjective mental state of the patients. Cannot this frame of mind and the reputation of the agent be developed and used in a scientific manner for therapeutic purposes? This question has been solved affirmatively. Prof. Bernheim, of Nancy (France), has such unbounded reputation among its lower classes for the curing of disease, that his assertion to these patients that their pain is gone, removes it at once, etc.

Dr. Bramwell demonstrated four patients to the Congress of Experimental Psychology in London, and whatever he said to these patients in the waking condition was instantly believed and took place. He produced anæsthesia, total and partial, hallucinations and sleep, all in a moment, by verbal or written order. In one woman seven teeth were extracted without pain, on his single assertion that she would feel none.

I may say that, in greater or less degree, psycho-therapeutics is unconsciously used by all those with reputations in our profession. The effects on patients are enhanced, doubtless, by the impressive manner of the consultant, by his crowded ante room, and by his big fee. The last item has a distinct psychical significance, for we automatically associate a value to an article in proportion to the cost or difficulty of obtaining it.

The most scientific method of psychotherapeutics is that practised by Prof. Bernheim. Even in Nancy the majority of his patients in the waking state are not impressed by suggestions for the relief of pain; but if he first suggests to them that they are asleep, which suggestion the great majority of them readily receive, he is then able to suggest that their pains are gone, and they believe him implicity, and, upon awaking, find themselves free from all symptoms. In the somnolent there is increased *credivity* and less independence of thought, which greatly assists the reception of suggestions. The ability to induce this somnolent condition can be easily acquired by any one with tact. Prof. Bernheim terms his process "Treatment by Suggestion." At the London Congress, Van Eeden pointed out that those who used psycho-therapeutics regretted its association with hypnotism.

The advantages of suggestion in the cure of disease are very great, covering all the states of suffering, whether functional or organic. The sensation of pain occurs in the cerebral cortex; it is a mental state, it implies consciousness, and hence, by an alteration in our state of consciousness, as is induced by psychotherapeutics, pain caused by organic disease can be cured as readily as functional pain. It may be used to cure insomnia, chorea, enuresis, and many other unpleasant psychical accompaniments of disease. The removal of these symptoms, it may be said, does not remove the cause of the disease. So far true; but the removal of anxiety, and the directing the attention to healthier channels indirectly hasten recovery and break one of those vicious circles so common in pathology.

The grand feature of this treatment is that it may be combined with the medical and may even assist the action of drugs. The use of this process is new to the profession; it is unconventional and different from orthodox practice, and, therefore, has an up-hill battle to fight till recognition comes.

In opposition to Dr. Dale's belief that the scope of the usefulness of psychotherapeutics is limited, I believe it may be used to alleviate or remove the symptoms of most diseases.

Uses of the Coal Tar Derivatives.—In a communication read before the Mitchell District Medical Society, July 14, 1892, and reported in the *Indiana Medical Journal* for August, Dr. C. W. Murphy, of Salem, Indiana, presents the results of varied trials of products of the aromatic series. He found that phenacetine was especially useful in hemicrania, and could be depended upon for the certain relief of hyperæmic headache. He also used phenacetine in a number of cases of whooping-cough, in which, as he states, it serves a useful purpose in diminishing the severity and frequency of the paroxysms of coughing. He refers also to its usefulness in the treatment of la grippe, in which condition it reduces the fever and relieves the severe muscular and neuralgic pains. Dr. Murphy finds that while antipyretic remedies have no specific effect upon the causes of fever, they serve a very useful purpose in the treatment of all pyrexias, a fact which, as he states, will not be denied by those who have given them an extended trial. In his belief they lower temperature by increasing the radiation of heat from the body, and diminishing heat production.

Burn of the Cornea.—Mrs. M., of New Albany, in some manner got a quantity of boiling water into the left eye. She was opening a can of concentrated lye at the time, and placing her finger in the lye, instantly put this finger into the eye in such a way as to leave large quantities of the crystals lodged between the lower lid and the surface of the ball. A druggist next door used ablutions of vinegar, washing away the excess of potassium, and thus limiting the extent of the burn. The family physician arriving, used castor oil as recommended in the books, and applied the cotton compress. The pain was most excruciating, and he gave hypodermic morphine.

After twenty-four hours of this kind of treatment I was called. I removed the dressings, washed the eye with a solution as follows: Borate of sodium, ʒiiss; chloride of sodium, ʒss; distilled water, ℥xii; camphor water, ℥iv. This application relieved the pain almost instantly, and, by renewing it every hour, the patient was comparatively comfortable. The next day she was able to visit me at my office. The slough involved a large extent of the lower portion of the cornea, perforating at the inferior margin. Before the period of perforation I directed a solution of eserine, 1 grain to the ounce of water, dropped into the eye every four hours. Keeping the pupil contracted, prevented the iris flowing into the open wound of the cornea. When the perforation took place the eye was closed with a little cotton wool and a piece of plaster, just enough cotton being used to keep the plaster from adhering to the eyelash. In about forty-eight hours the dressing was removed, and the corneal wound found closed, adhesions had taken place between the lower lid and the surface of the ball. Passing a probe under the adhering portion, separation was produced, and a little ointment of yellow oxide of mercury placed between the lid and ball, smoked glasses being used, and the eye left open.

In this manner the treatment was carried on until complete cicatrization resulted. Where burns are so extensive as to make it impossible to prevent adhesions between the lid and ball, those may be greatly modified by leaving the eye open, and daily separating the opposed abraded structures with a probe anointed with a little yellow oxide of mercury ointment.—Dudley Reynolds, in *Med. Mirror.*

Going Wild.—In the *Hospital Bulletin* of the Second Minnesota Hospital for the Insane, R. M. Phelps gives a sketch of this curious condition. He says:

"According to the many stories heard, when a man becomes lost in a great forest, he immediately, or soon, exhibits a tendency for rapid, nervous walking, and activity, which tends to increase and to become irrational and purposeless. Having reached this stage, the one so lost, is apt to spend time and strength rushing blindly about in the woods, only becoming more confused and irresponsible as

time goes on. This mental tendency was designated by the woodsmen by the term 'going wild.' The trouble is evidently one of some importance there, but as far as I know, no therapeutic agent or measure was suggested as a preventive. A long experience in the woods was supposed to tend to prevent it, but not necessarily nor always. The temperament, the quiet and stability of the emotional nature, were seemingly factors, determining whether or not this result be brought about.

"Now, asking you to accept as facts that there are more or less frequent cases of the kind occurring, let us try and analyze them; and see if we have here anything suggestive of mental disease, or impairment, and if any lessons can be learned therefrom. From being lost, temporarily, in the woods several times myself, I can say that there is certainly a nervous uneasiness and unrest that comes on a person at once. There is certainly a hurrying and tearing pace assumed at once to get out. The feeling is one of intense nervousness, seeming unlike any other ever experienced, and is somewhat different from that of being lost on the plains. Further than this, I cannot speak from personal experience. I can very easily imagine, however, this feeling as going to irrational action.

"One story is related of a case as wildly tearing about and through the woods for from one to two days, and finally happening to run right through a camp, the occupants of which had to actually pursue and hold him, until after a few hours he became quiet. This represents the state of mind of most of the cases given in stories current. On the contrary, as regards activity, however, is the story of a child lost out from Escanaba. As was customary, a crowd patrolled back and forth with bells and guns. The child was finally found, however, keeping perfectly still, although it must have been passed a number of times by the noisy crowd. The same nervous terror must have been active in this case to keep the child quietly in one place that had usually acted toward an irrational and purposeless action.

"I would also mention the story of a civil engineer, of eighteen years' experience, told concerning himself. He was left behind in the woods by his party one day toward evening, and being off the surveyed line did not know exactly his location. He knew the country, however, and was perfectly conversant with the use of his compass. But he became nervous, and began to doubt which point of the needle was north, and finally ended by losing all faith in it, and in running along blindly. Luckily, however, in a few minutes he struck the surveyed line.

"Now for a theory. Is this a new form of mental disease? I think not, properly so-called. I should judge it to be allied more closely to the hypnotic, or trance state, which is usually more closely allied to its neighbor, sleep, than to any insanity. It might be called a temporary hypnotic abeyance, of ordinary rational activity; which, like the hypnotic state itself, does not tend, as far as I know, toward actual insanity, but tends to an awakening and a return to normal by a removal of its cause.

"This mental state has a character peculiarly its own, from which, perhaps, some lessons might be learned. The power of a purely mental impression to produce mental confusion is markedly shown, at least, and the peculiar character of the effect produced is of considerable interest."

THE SUBCUTANEOUS INJECTION OF NORMAL NERVE SUBSTANCE IN EPILEPSY.—Prof. Baber, of Bucharest, has just published, in the *Deut. Med. Woch.*, an account of a new method of treatment of neurasthenia, melancholy, and genuine epilepsy by interstitial injections of nerve substance. He was led to try the effects of such injections by observing that persons treated for rabies by the Pasteur method were frequently cured of any other nerve ailment they might be suffering from. Both the professor and his assistant were sufferers from spinal neurasthenia, and were both cured by the treatment. Believing that the good result was mainly dependent on the amount of nerve substance injected, he tried the effect of large doses of nerve substance (1 grm. in 5 grm. bouillon) in a number of neurasthenics and similar nervous diseases.

The result was very gratifying, the neurasthenics declaring themselves better after the first injection, and especially digestive disturbances, tiredness and insomnia, all disappeared after a course of treatment lasting about three weeks. Other and ordinary measures were simulta-

neously carried out, but they had hitherto been entirely without effect.

During the current year he has treated forty cases by his method, which consists in the following: The brain and spinal cord of rabbits and sheep are kept absolutely free from germs, and pressed through several layers of clay, and an emulsion is then made with 5 parts of bouillon and filtered. Of this the neurasthenics generally received four to five injections, the epileptics five to six weekly, and always 4 to 5 grm. of an emulsion of 1 to 5 of bouillon. The localities selected for the injection were the abdomen and flanks. A number of clinical histories are given. The most striking and best results were obtained in cases of grave melancholia, of neurasthenia and of sluggish heart.

From the middle of May, a number of cases of genuine epilepsy came under treatment, in which the injections brought about a "perfectly striking" improvement. Thus one patient had suffered for three years from daily recurring epileptic attacks. From the time of the commencement of the treatment to that of writing, not a single attack had occurred.

In another case the disease had been existent for two years, for some months there had been seven to eight violent attacks every day. From the commencement of the treatment (May 1), there was one attack on Juné 11, and after that, up to the 22d, none. The other epileptic cases were equally favorably influenced by the treatment, so much so, that the author feels himself justified in formally pronouncing the opinion that the method of treatment introduced by him in 1889, of injecting nerve substance in cases of neurasthenia melancholy, and especially of genuine epilepsy, is destined to play an important part in the treatment of such diseases.

Prof. Baber does not look upon the therapeutic action as a chemical one, nor is it to be identified with Brown-Séquard's testicular fluid. He believes it to act through the introduction of rather a large quantity of nerve substance into the lymph stream.—*Med. Press.*

News and Miscellany.

DR. G. HUDSON MAKUEN has removed to 1419 Walnut street.

WEEKLY Report of Interments in Philadelphia, from September 24 to October 1, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	4		Hernia	1	
Abortion	1		Indigestion		1
Apoplexy	11		Inanition		6
Asphyxia		1	Inflam'n brain	4	10
Asthma	1		" bronchi	6	2
Bright's disease	4		" kidneys	5	2
Burns and scalds	3	2	" larynx	1	
Cancer	7		" liver	1	
Casualties	10	1	" lungs	16	13
Congestion of the brain		4	" heart	1	
Congestion of the lungs		2	" peritone'm	6	2
Congestion of the liver	1	1	" pleura	1	
Cholera infantum		26	" s. & bowels	4	7
Cirrhosis of the liver	1		" spine	2	
Child birth	2		Insanity	1	
Consumption of the lungs	38	5	Malformation		1
Consumption of the bowels	1		Marasmus		32
Convulsions		12	Obstruction of the bowels	2	
Croup		2	Old age	12	
Cyanosis		6	Paralysis	4	
Debility	2		Poisoning	1	
Diabetes	1		Pyæmia	1	
Diarrhœa	2	1	Rheumatism	2	
Diphtheria	1	40	Scrofula		1
Disease of the heart	24	4	Septicæmia	2	
Dropsy	1	1	Sore mouth		1
Dysentery	1		Softening of the brain	1	
Effusion of the brain		1	Suicide	3	
Epilepsy		1	Tabes mesenterica		1
Erysipelas		1	Tetanus		1
Fatty degeneration of the heart	2		Tumor	1	
Fever, malarial		1	Ulceration of the bowels	1	
" scarlet		2	Uræmia	3	2
" typhoid	8	3	Vomiting during pregnancy	1	
Goitre	1		Whooping-cough		4
			Total	210	203

SPERMINE belongs to the class of bodies designated by physiological chemists as leucomaines, products of metamorphosis in the living being, bearing a pronounced relation to health and disease. It diminishes significantly in quantity, when vitality is lowered, in the impoverishment of old age, and very noticeably in certain diseased processes; thus, we find it present in the sputum of emphysema, in the bronchial discharges of acute bronchitis, and in the excretions of tuberculosis, and many other chronic and wasting diseases.

It exerts a decided influence upon the health, activity and longevity of the blood corpuscles themselves, particularly the leucocytes. Compounds similar in chemical structure and significance are present in the tissues and circulation of all animals.

Under the name of "Charcot-Neumann Crystals," spermine has long been known to investigators, though it is only during the past few years that its physiological and pathological importance has been

recognized. These crystals have been found cropping out on the surface of anatomical specimens which have been preserved in alcohol.

Spermine exists in a proportionately remarkable extent in the brain and marrow of human bones, as well as in the glandular fabric of the procreative organs and their peculiar secretions.

In many diseased conditions, or where vitality is impaired, the replacement of this evidently necessary element is attended with a heightening of all the vital functions, physical as well as mental.

—Maier, *Pacific Med. Journal.*

THE Mississippi Valley Medical Association will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday and Friday, October 12, 13 and 14, 1892. The program is a valuable one, containing many of the most prominent names in the profession. It covers every department in medicine. The attendance will be unusually large, as Cincinnati is the center of population of the United States. Not only the scientific but also the social part of the meeting will be of the highest order. The interest of the convention will be augmented by the meeting of the officers of the Pan-American Medical Congress, also other bodies of medical men. Dr. Benjamin Ward Richardson has written his earnest desire to be present. The Association will be just in time and just in line for those en route to the American Public Health Association in the city of Mexico. Among the many prominent gentlemen who are expected to read are the following: Dr. Hunter McGuire, Richmond, Va., President of the American Medical Association, the address on Surgery. Dr. Hobart Amory Hare, Professor of Materia Medica Jefferson Medical College, Philadelphia, the address on Medicine. Papers are expected by Drs. Reed, Ricketts, Hall, Dowling, Ayres, Connor, Ransohoff, Hoffe, Dandridge, Comegys, Whittaker, Zenner, Zinke, Cincinnati; Cook, Woodburn, Thompson, Indianapolis; Owen, Walker, Evansville; Lydston, Moyer, Belfield, Hamilton, Chicago; Mathews, Wathen, Larrabee, Reynolds, Renner, Louisville; Savage, Nashville; McGahan, Chattanooga; Dixon, Henderson; Hughes, Love, Loeb, Dalton, Borck, Bond, Hulbert, McIntyre, Ohmann, Dumesnil, Lewis, St. Louis; Lanphear, Kansas City; Smith, Montreal; Sutton, Murdock, Daly, Pittsburg; Early, Ridgeway, Potter, Thornbury, Buffalo; Baker, Cleveland, Thorn, North, Toledo; Walker, Detroit; Jones, Eaton, Baldwin, Columbus; Bond, Richmond. C. A. L. Reed, M.D., President, Cincinnati; E. S. McKee, M.D., Secretary, Cincinnati.

A NEW METHOD OF EXTRACTING FOREIGN BODIES FROM THE EXTERNAL AUDITORY CANAL.—In a case in which a child had pushed a porcelain button into its ear, and in which all efforts to extract it by means of injections and forceps had failed, the following method was used: The physician obtained some inspissated Venice turpentine and melted it; he then dipped the end of a match into the melted turpentine and placed it against the button in the ear. The turpentine adhered strongly to the foreign body, which was then easily extracted.—*Pop. Science News.*

[We thought that this was a "new" method when we first saw it, and published the item with an editorial note, calling attention to this striking instance of American cleverness. Next time we saw it brought forward as a novelty we grew a little suspicious; and on looking up the matter found it had been discovered seventeen times in the last sixteen years. Not only so, but Boerhaave treated of it in his second edition; Paracelsus mentioned it as having been one of the chief secrets of the Rosicrucians; while Rhazes in his XI chapter attributes it to Solomon, and relates the following anecdote concerning it: "And the queen of Saba presented to Solomon her small son, who, for some occult reason had thrust into his external auditory meatus a small pearl, the which rested against the drum, fitting so closely into the canal that no instrument could be inserted behind it. And she said, 'Oh king, remove now the jewel.' And Solomon took counsel with his friends. And one urged the king to blow in the boy's other ear, and another would fain chop open the youth's head, and a third would dissolve the pearl by filling the ear with sulphuric acid. And as the king hesitated between these suggestions, his gaze rested upon his youngest daughter, and an inspiration came to him. And he called to him the girl and said, 'Open wide thy mouth.' And she did so. And he took therefrom a lump of spruce gum, and he fashioned this into a

pencil and he lubricated the sides with saliva. And he pushed the gum into the boy's ear until the gum rested on the pearl, and when he withdrew the gum behold the pearl came also. And all marveled at the king's cuteness." Nevertheless, it is certain that the idea is older than Solomon, for its germs are to be found in the book of Ani (B. C. 4500 circa), where the practice is attributed to the Cushites. And in the 119th volume of Confucius, it is stated that a physician of his day proposed it as a novelty, on which the learned author makes no comment, but appends to the story a spirited sketch of two rats; the significance of which is not known at present.]

THE *Ladies' Home Journal* for September contains an interesting article by John Lambert Payne on the subject of "Why Young Men Defer Marriage." His conclusion is that the modern young man spends so much on luxuries that he cannot afford marriage; his habits being antagonistic to that prudence and preparation that make it possible for him to marry at twenty-five.

EIGHTEEN DAYS OF A TEMPERATURE OF 46° C.(114 8° F.)—Dr. Obelar has reported a temperature of from 45° to 46° C. in one of his patients. This temperature was carefully verified, and lasted for eighteen days before death.

Union Médicale du Nord-est.

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S Navy for the week ending October 1, 1892.

STONE, EUGENE P., Passed Assistant-Surgeon. Detached from "Pinta," and granted two months' leave.

ATLEE, LOUIS W., Passed Assistant-Surgeon. Detached from "Independence," and ordered to the "Pinta."

OGDEN, F. N., Passed Assistant-Surgeon. Detached from duty in connection with Inter-Continental Railway Commission, and to the "Independence."

MARTIN, WILLIAM, Surgeon. Detached from the "Thetis."

RUSH, CHAS. W., Passed Assistant-Surgeon. Detached from the Navy Yard, New York, and granted six months' sick leave.

DR. BRUSH'S

KUMYSS

"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting, and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,
ARCH M. CAMPBELL, M.D.

Farm and Laboratory,

MT. VERNON, N. Y.

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(This, next to its taste, is its most valuable property, as ordinary bitter fluid extracts do.)

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PAGE

ORIGINAL ARTICLES:

CHOLERA. By. E. de la Granja, M.D. - - - - - - 419
SYPHILITIC NERVOUS DISEASE. By Edward C. Mann, M.D., F.S.S. - - - - - - - - - - - - 421
EPISTAXIS—ITS ETIOLOGY AND THERAPEUTICS. By S. J. Radcliffe, M.D. - - - - - - - - - - 422
HERPES ZOSTER—A CASE. By William F. Waugh, M.D. - - - - - - - - - - - - - - - - - 425

EDITORIAL:

OPENING OF THE NEW CLINICAL AMPHITHEATER - 426
CONCERNING CHOLERA - - - - - - - - - - - 426

ANNOTATIONS:

Financially Embarrassed - - - - - - - - - - 427
Torsion of Duodenum - - - - - - - - - - - - 427
The Golden Rule - - - - - - - - - - - - - - 427
London Hospitals Severely Taxed by Scarlatina Epidemic - - - - - - - - - - - - - - - - 428

LETTERS TO THE EDITOR:

Cocaine Poisoning. *Mattison* - - - - - - - - - 428
Coccydynia. *Coates* - - - - - - - - - - - - 429
The Uses of Digitalis. *Lewis* - - - - - - - - - 429
My Pill. *Taylor* - - - - - - - - - - - - - - 430

THE MEDICAL DIGEST:

For Earache—Rare Case of Tuberculosis of the Stomach—Relief of Constipation (*Beatty*)—Electric Light as an Anodyne (*Gatchkowski*)—Hemorrhage Through Uninjured Skin (*Derabin*)—Unusual Termination of a Case of Cancrum Oris—Puerperal Eclampsia (*Poole*)—Heat Apoplexy; Hyperpyrexia; Death (*Williams*)—Ascaris Lumbricoides in Typhoid Fever (*Reynolds*)—Artificial Immunization of Animals Against Cholera (*Klemperer*)—Treatment of Epilepsy with the Pasteur Antirabic Injections (*de Giovanni*)—Arrest of Vomiting in Animals (*Sabbatani*)—Exalgin in Chorea (*Dana*)—Chloroform in Cholera (*Desprez*)—Orexin Hydrochlorate (*Rizzi*)—Bromide of Strontium, or Bromide of Potassium for Epilepsy (*Deny*)—Appendicitis (*Browne*)—Massage in Megrim (*Eccles*)—Hard Chancre on the Genitals (*Kudrasheo*)—For Rheumatism (*Staples*) Elastic Constriction (*Senn*)—Toxic Nephritis (*Lancereaux*)—Iodoform in Tuberculous Joints (*Wyatt*)—Case of Double Tubal Gestation (*Walter*)—Bactericidal Action of Alexin (*Hankin*)—Diabetes Insipidus—Removal of the Ovaries Followed by Menstrual Molimina (*Grammatikati*)—Therapeutic Notes—Bed-Clothing for the Sick (*Asclepiad*)-Methylene for Internal Administration (*Asclepiad*)—Styptic Colloid with Calomel or with Mercury Bichloride (*Asclepiad*)—Drunk or Dying (*Occidental Med. Times*)—Hydrocele (*Hearn*)—Worcester Sauce in Sea sickness (*Miller*)—Black-beetles as a Medicine (*Pop. Med. Monthly*)—The Treatment of Cholera Morbus (*Santvoord*)—General Wile's Cholera Remedy—An Anti Choleraic Mixture (*Asclepiad*)—Cantani's Treatment of Cholera - - - - - - - - - - - - - - - 430–443

NEWS AND MISCELLANY - - - - - - - - - 444

MEDICAL CORPS, U. S. NAVY - - - - - - - 446

NOTES AND ITEMS - - - - - - - - - - iv, viii, ix

Original Articles

CHOLERA.

BY E. DE LA GRANJA, M.D.

IF there is any disease above all others in which prevention is better than cure, Asiatic cholera is the one; especially because prevention is easy; cure difficult; and treatment, even if skilful, very often unsuccessful.

The best means of prevention is absolute cleanliness, not only in the household and its surroundings, keeping the yards and cellars properly disinfected by the liberal use of chloride of lime and sulphate of iron, but the alleyways, lanes and gutters in the public streets should be equally treated. Great care should be taken in keeping the skin in proper condition by frequent bathing, and the clothes well brushed and aired, changing them as often as possible, according to the means of the wearer.

Although there should not be a great material change in the way of living, all kinds of excesses should be avoided. The food should consist of fresh meat, thoroughly well cooked at high degree of heat; vegetables of easy digestion cooked in the same manner, and ripe fruit previously washed with water which had been boiled and kept in sterilized vessels. Milk, water, and all other beverages must also be boiled and sterilized; and those addicted to spirituous liquors should use them moderately and largely diluted with lemonade. Proper recreation and moderate smoking are beneficial.

When the dread epidemic is near at hand, the best prophylactic treatment is from 3 to 5 drops of hydrochloric acid, according to individual tolerance, in a cup of tea, or a tumblerful of water, taken morning and night. Other acids might do fully as well, but in the experience of the writer in long and severe cholera epidemics, the above prophylaxis has been highly succesful, keeping free from the

disease, without a single failure, thousands of persons whose duty it was to be constantly with the sufferers or victims of the epidemic.

Asiatic cholera is an infectious, but not a contagious, disease, and its only way of invasion is by the mouth to the stomach, which, if in alkaline reaction, lets the germs pass into the bowels, where, from ten to twelve inches below the pylorus to the ileo cæcal valve, they find their favorite ground to grow and propagate. The cholera germs are eliminated through the bowels, but never through the skin or the lungs as some author erroneously supposes. In fact, the germs of the cholera, when found after death, are always located between the pylorus and ileo cæcal valve; and, in short, virulent cases, where the disease terminates fatally, are often absent. The bacillus of the cholera is never found in potable water, and being devoid of spores, does not travel through the air, which, if dry, is destructive to its existence.

The cholera is generally ushered in with premonitory symptoms consisting of languid feelings, nausea, abdominal pains, bilious diarrhœa, and a general sensation of chilliness. When all, or some of these symptoms are present, the sufferer, avoiding the use of any secret nostrums or cholera remedies of any kind, should send at once for his physician, and go to a warm bed in a well-lighted, well-ventilated room, as free as possible from furniture, carpets and draperies. At this stage the disease is often controlled with a mixture of equal parts of tinct. opii, tinct. capsici, and spirit. camphoræ; the dose being 30 drops every fifteen or twenty minutes. At the same time, champagne, brandy or Jamaica rum, with infusion of camomile, in small quantities may be allowed as a drink. If no improvement is observed in an hour or an hour and a half, the opium must be suspended, as it is an extremely dangerous drug in cholera, because, if the disease progresses to the algid state, the urine being suppressed, even if the disease is conquered, the anuria may become so persistent that the case may terminate fatally by uremic toxemia. The vomit of cholera is often relieved with 10 grains bismuth subnit. and 2 or 3 drops of chloroform suspended in cinnamon water, repeated as frequently as necessary.

At the beginning of the algid period of cholera, the capillary circulation becomes impaired, the temperature falls rapidly, and the vomit and the diarrhœa taking a violent activity, the salts and liquids of the body are lost at a terrible rate. As this period advances, the sufferer is seized with great thirst and severe cramps; the fingers and toes become contracted; the eyes dry and sunken; the urine and saliva impressed; the tongue and mucous membrane of the mouth purple; the nails of a livid, dark, leaden hue; the extremities, tongue and breath ice cold; the voice is low and scarcely audible, but the patient answers all questions willingly and intelligently; the pulse is absent at the wrist, and the face cyanotic and cadaveric. The alvine dejections at this period are thin, white, simulating rice water, with grains or flakes resembling rice kernels.

The algid state is to be combated from the beginning with active frictions to the spine and extremities, either with a flesh brush, or with a woolen cloth dipped in a hot solution of mustard, making use of hot bottles to keep up as much as possible the temperature of the patient. The body should be wrapped in compresses wrung out of a hot, saturated solution of chloride of sodium, which should be changed as often as they become cool. The spirit camphora is still useful at this period; but, as the general circulation has become affected, it is to be supplemented with 5 drop doses of tint. apocynum every two or three hours, and hypodermic injections of strychnine, so as to assist and support the overworked heart. Large enemas of a hot solution of chloride of sodium (5-100 strength), with acidi tannica ʒj to Oij, or 20 to 25-100 wine or cider vinegar, frequently repeated, are greatly beneficial. The intravenous injections of saline solution, recommended by Cantani, are of great value in the algid state, especially before the blood has become so thick and gelatinous as to resist the entrance into the vein. During the algid period the sufferer should be allowed hot coffee, tea, and brandy and water in moderate quantities, and water with chloride of sodium ʒj to Oij. *ad libitum*

Towards the end of the algid state, or the beginning of the typhoid, hypodermoclysis, as first recommended by Cantani, frequently produces the most gratifying results, removing the suppression of the urine, and gradually re-establishing the free circulation of the blood.

The infectious clothing and other effects used by the sufferer are to be disinfected in every case, according to the directions of the attending physician.

While it is to be hoped that some specific may be discovered for the prompt relief and cure of cholera, immunity by inoculations is not likely ever to be obtained, as the disease itself does not give immunity. It is not a very rare thing to find individuals who, after recovering from a severe attack of cholera, are assailed by another of equal or greater severity during the same epidemic.

It is quite surprising that at this late date, a physician of ordinary intelligence should regard with favor the inoculations of Ferran. Leaving this distinction to Dr. Shakespeare, it is only fair to say that the methods of Ferran in the cultures of the comma bacillus, as well as in the so-called preventive inoculations, were crude, unscientific, and unprofessional because mercenary.

These inoculations were made by Ferran and his commercial partners—who, be it said to the credit of the profession, were not physicians; one being a mining engineer and the other a lawyer—charging for them from five to fifteen pesetas. They did not pretend to use the slightest antiseptic precautions. Many of those inoculated suffered from severe inflammation of the arms; and the correspondent of the *British Medical Journal* emphatically stated at the time that he had seen, as a result of such inoculations, grave affections of eryispelatous and septic character; and one of the patients whom he saw died of septicemia in the *Hospital of Santa Lucia*, at Alcira.

The statistics presented by Dr. Ferran, as well as by the local authorities of Spain during the cholera epidemic of 1885, are false and fraudulent, although each party had a different motive or interest for so doing: Ferran to make money, and the local authorities to save their districts from being subject to quarantine; but, as a discussion of this matter would be of no material value to the profession, it is perhaps better to confine ourselves to practical issues.

THE *United States Investor* has decided to offer $1,000 in prizes for essays of not more than one column each respecting American cities and towns.

SYPHILITIC NERVOUS DISEASE.

By EDWARD C. MANN, M.D., F.S.S.,

President New York Academy of Anthropology; Member Medical Society of the County of New York; Member Brooklyn Pathological Society; Member Royal Asiatic Society, of London; Gold Medallist Society, Science, Letters and Art, of London; Medical Superintendent, Sunnyside Sanitarium for Diseases of the Nervous System, Inebriety and the Opium Habit, 128 Park Place, near Prospect Park, Brooklyn, N. Y.

AMONGST the affections of the nervous system, those due to syphilitic lesions are certainly the most interesting, as well from a clinical as from a therapeutic point of view, for while, on the one hand, the lesions occurring in the different parts of the nervous system give rise to the most varied symptoms, an anti-syphilitic treatment on the other hand is, in most cases, especially where the specific lesion has not, in its turn, caused irreparable secondary degenerations in the nervous tissues, followed by the happiest results. The aids we have in diagnosing the syphilitic nature of a nervous disease are the following:

The Age of a Patient.—The age of persons affected with syphilitic nervous disease ranges between twenty-five and forty.

A Syphilitic History.—We must bear in mind that it is often difficult, especially in women, to trace such a history, That often, when the specific virus selects for its locality the nervous system, there are few, if any, secondary symptoms, while, on the other hand, nervous troubles coming on in a syphilitic patient may be simply due to a coincidence. Certain forms of syphilitic nervous diseases are much oftener preceded by well-marked secondary symptoms than others, for instance, syphilitic epilepsy and the more acute form of meningitis which come on soon after infection.

Multiplicity of Lesion.—Nervous symptoms, which can only be accounted for by the assumption of separate pathological products situated in different parts of the nervous system, are almost always due to syphilis.

Absence of Other Causes.—This applies particularly to the paralysis of the different cranial nerves and to sudden attacks of hemiplegia in young persons, in the absence of any cardiac or renal troubles.

Influence of Anti-Syphilitic Treatment.—In a great many cases, especially where the course of the nervous disease is acute, and when the patient has not previously undergone an anti-syphilitic treatment,

the effects of specific treatment are very marked. In the more chronic cases, where the syphilitic deposit has itself undergone degenerative changes, and has established secondary changes in the surrounding nerve tissue, the treatment will necessarily be of slight avail.

The early manifestations of syphilitic nervous disease are too much neglected, and there are several very important points for the general practitioner to bear in mind.

At a period very near in point of time to the primary infection, syphilis may invade the nervous center. The early cerebro spinal syphilises are those that develop during the virulent period of the disorder—that is, during the first two or three years after infection.

There are degrees in the precocity of cerebro-spinal syphilises. Those of the first degree are those that make their appearance within the first twelve months; the second degree includes those that develop in the second and third year of the constitutional malady. Among the early visceral determinations of syphilis the cerebro-spinal are incomparably the most frequent. They are also the most dangerous. Their gravity is not at all in direct proportion to their diathetic age; those that occur during the first months of syphilis are as serious as those that appear in the latest stages. All the phenomena that constitute the symptomatology and processes of these syphilitic determinations to the nervous system, are as well marked in the early cerebro spinal syphilitic neuroses as in the later ones. There are some symptoms that appear to predominate. The most frequent are those that consist in an attack of hemiplegia, involving all one side of the body. Among the attacks of hemiplegia those constituted by the symptoms of aphasia, with right hemiplegia, exceed in number all the others. The paralytic forms are much more numerous than the convulsive or epileptic forms in precocious cerebral syphilis. In the cerebro-spinal syphilitic neuroses, psychic disorders and incoördination are never systematized as in insanity, general paralysis and locomotor ataxia. The absence of systematization in the cerebro-spinal syphilitic neuroses should be regarded as one of their chief characteristics. The only exception is aphasia, with right hemiplegia. Early determinations of syphilis to the spinal cord are far less frequent than those to the brain. Circumscribed or diffuse hyperplastic diffusions, but rather circumscribed in the cortical layer of the brain and in the pia mater, syphilitic alteration of the sylvian arteries and consecutive ischæmic softening are the lesions that appear to belong to precocious cerebral syphilis. In some cases of early cerebral syphilis, followed by death, we find no lesions, but in these cases we may presume that death was the result of a sudden anæmia, extinguishing at once the nucler of innervation of the centers indispensable to life. Only vague conjectures are possible as to the etiology of precocious cerebral syphilis. In the majority of cases the primary symptoms, as well as the subsequent cutaneous and mucus manifestations, were very mild.

The general progress of the constitutional disease is not modified by the appearance of precocious syphilitic affections of the nerve centers. The other manifestations are produced before, after or during the involvement of the nervous system without undergoing any change in their forms, degrees, their progress or their topography. The precocity of cerebro-spinal syphilitic neuroses furnishes no particular indications as regard treatment. Whatever the age of the constitutional disease, the manifestations in the nervous centers demand the same specific treatments. Each case will present the indications pointing to the choice dose and combination of iodide of potassium, sodium and of mercury. The general practitioner will probably find that some of the cerebral troubles he will meet with will occur from three to fifteen years after the initial ulcer, and early and energetic treatment must be employed and kept up with the original energy during the course, and continued for a long time after the disappearance of symptoms.

EPISTAXIS—ITS ETIOLOGY AND THERAPEUTICS.

By S. J. RADCLIFFE, M.D.,
WASHINGTON, D.C.

HEMORRHAGE from the nose, it has been said by some writers, occurs oftener than from any other part of the body. This proposition may be maintained more particularly in regard to males than females.

During the earlier and later periods of life, the difference is not so marked, but

during the middle period in females, after the commencement until its cessation, the menstrual flow has a very important modifying influence.

The situation of the nasal fossa, its anatomical relations, and its important physiological functions render it especially liable to hyperemia and hemorrhage. Lying in the course of, and being a part of the respiratory passage, continually exposed to deleterious influences, internal and external, it forms an essential element in a vital process going on during life. It is in no sense an isolated spot, but responds to most reflex systemic irritations. It is among other lesser indications the seat of the olfactory sense, assists in modulating the voice, and protects the air passages from injurious attacks from whatever source.

Anatomically speaking, it is of a high order of organization, being supplied with blood-vessels, nerves and glands more numerously, possibly, than any other similar area—the peculiarity of its arterial supply being particularly manifest in the arrangement of its dense and delicate, superficial as well as deep capillary system, filling compactly the whole mucous, and submucous tissues, even perforating the two binated bones, and the plates and cells of the ethmoid and sphenoid in their passage to the nose.

It is this highly vascular supply that causes in abnormal conditions proliferation of tissue, morbid growths, hyperemia thickening and hypertrophy of the mucosa of this part, and it is the frequent overgrowths from oversupply, overnourishment of this area which affords the surgeon opportunities to apply surgical therapeutics.

This extreme vascularity may be observed at will, as under certain irritants turgescence may be easily demonstrated, which displays at the same time the peculiar nature of the structure of the living membrane of this cavity.

It is now no longer a matter of speculation but a well received opinion, that the layer of tissue between the lining mucous membrane above, and fibrous tissue below, is cellular or reticular, and virtually erectile, and is analogous to the erectile tissue of the corpus spongiosum in another part, being very distensable, easily becomes rigid, and as readily collapses; and it can be readily conceived how this soft, pulpy structure of nucleated cells is adapted to insure the proper development of the function of the nasal cavity.

The easily distensable nature of this reticular stroma, and the extreme vascularity of the parts readily invite an influx and turgescence, which may be maintained or dispersed according to the duration of the irritant causing it.

The arterial supply of the nasal fossa is a very important feature in its anatomical relation, and is derived, as is well known, from several sources, but particularly from the posterior nasal or spheno palatine branch of the third portion of the internal maxillary, and from the anterior ethmoidal branch of the ophthalmic artery, with which it anastomoses. The nasal or spheno-palatine passes through the spheno-palatine foramen into the cavity of the nose at the back part of the superior meatus, and divides into two branches, one internal, the artery of the septum, passes obliquely downward and forward along the septum nasi, supplies the mucous membrane of the olfactory tract, and anastomoses in front with the ascending branch of the descending palatine artery. The external branches, two or three in number, supply the mucous membrane covering the lateral walls of the nares, the antrum and the ethmoid and sphenoid cells.

The posterior ethmoidal branch of the ophthalmic artery passes through the posterior ethmoidal foramen, supplies the posterior ethmoidal cells, and entering the cranium gives off a meningeal branch which supplies the dura mater, and nasal branches which descend into the nose through the aperture in the cribriform plate, anastomosing with the spheno-palatine. The anterior ethmoid branch also accompanying the nasal nerve through the anterior ethmoid foramen, supplies the anterior ethmoid cells and frontal sinuses, and entering the cranium divides into a meningeal branch which supplies the adjacent duromater, and a nasal branch which descends into the nose through an aperture in the cribriform plate. The descending and ascending palatine also furnish blood by anastomosis with the other arterial branches.

This large blood supply comes almost directly from large branches of the external and internal carotid arteries, which rapidly divide, anastomose, and finally terminate in a fine dense capillary network minutely distributed to the entire

mucous membrane and cellular tissue, forming the lining of the nasal fossa, the walls of which are very thin and their terminals extremely superficial, and to this near relation of the arterial supply of this locality, in connection with its intimate nerve distribution with the brain, may be attributed many sympathetic affections effecting both regions, and many grave symptoms growing out of either should be properly differentiated in practice, as diseases of either situation may give rise to unlooked for complications.

Thus far I have only hinted at some of the possible predisposing causes of epistaxis—that is to say, of those relating to position, anatomical characteristics, and the part the nasal fossa plays in the respiratory act. The hemorrhagic diathesis is an important predisposing cause of epistaxis, and so is general plethora, but this physical condition may be applied equally as well to other forms of hemorrhage. It does not relate particularly to epistaxis, and the former especially may be considered more in the light of a symptom of a general dyscrasia rather than having any direct local significance. Fatal hemorrhages have occurred from this state from the uterus, the bowels, from extraction of teeth, lancing the gums, ablation of the tonsils, or from slight incised wounds. It may be either accidental or spontaneous.

The principal active or direct causes of epistaxis are sympathetic or symptomatic. The first being compensatory or vicarious, and may be reflex or direct; the second an indication of some other near or distant organic disturbance.

In a general plethoric condition of the system, a slight exciting cause is sufficient to produce it. In a plethoric state of the liver, the spleen, the uterus, the brain, when a superabundance of blood is invited to those organs from temporary disorders or obstruction to the circulation, we often see free and abundant epistaxis. Epistaxis thus forms a ready means for the depletion of the organs involved, and consequently is a source of relief. Grave symptoms of brain disorder have thus been averted by a free hemorrhage from the nasal cavity, just as visceral infarction is relieved by liberal bleeding from the hemorrhoidal vessels.

Of the etiological factors in the other category, that is, of the symptomatic causes of epistaxis, it may be said that any permanent injury or disease of any of the abdominal or throracic viscera is liable to give rise to it, especially diseases effecting the center of circulation—the heart. Probably no one subjective symptom is more pathonomonic of heart trouble than epistaxis. In hypertrophy with valvular disease of this organ especially is this apparent. I have seen in such cases the nose bleed to faintness, and was only relieved when this condition was reached. It is well in every case of epistaxis to inspect the condition of heart and circulatory apparatus, for in many cases this is its sole cause.

Epistaxis cannot therefore be said to be entirely a local disorder. Any immediate hemorrhage from the nasal fossa must be either from traumatism—from abrasion, ulceration or necrosis of the proper lining or subjacent tissue of the cavity. In a majority of the cases it is either sympathetic or symptomatic.

In a general way there are certain facts which may be stated thus: If spontaneous hemorrhage occurs in the young it is due either to general plethora or is vicarious, if in the old, it is an evidence of either disease of the blood-vessels, or organic disease of the heart. It is either a sympathizing influence by which one part of the system relieves another when temporarily embarrassed, or it is a sign board pointing to grave constitutional disorders looking to us for repair, and without which they might possibly be overlooked.

The therapeutics of epistaxis therefore to be rational should be based upon such reflections as these, for every case of epistaxis cannot be looked upon in the same light, or placed in the same category. The true pathologist is in this connection, as in every other, the true therapeutist. When we have really marked out the legitimate cause, its pathology and connections, then only are we prepared for treatment. This refers as well to general as well as local therapeutics.

There is rarely a case of uncomplicated epistaxis which cannot be arrested. The bleeding may continue some time, and the quantity of blood lost may be sometimes enormous. Reports of some, particularly of the older writers, seem fabulous. One mentions a case where forty-eight pounds of blood were lost; one where eighteen pounds lost in thirty-six hours; another of not less than seventy-five pounds within

ten days, which, says Mason Good, is probably nearly three times as much as the patient possessed in his entire body at the time the hemorrhage commenced. The quantity usually lost varies from a few drachms to several pints. I had a case once, under my care, in a boy of fourteen, suffering from cardiac hypertrophy, with valvular insufficiency, who had large bleedings from the nose. On one occasion I saw him with a basin in his lap containing from six to eight pints of blood, which he had lost during the day from epistaxis. Epistaxis rarely causes death alone. There must be some complications behind it to produce this result.

The ordinary local treatment is generally sufficient to arrest the flow of blood in epistaxis. This consists in insufflation of such styptics as alum, tannin, persulphate of iron, or injection of strong solution of silver nitrate or zinc chloride, or packing the cavity with pounded ice, or introducing a pretty firmly rolled dry sponge cylinder, but the means mostly relied on is by plugging the anterior and posterior nares with narrow strips of cotton bandage or muslin, or cheese cloth, either plain, or steeped in one of the above mentioned styptics. When well done this plan leaves nothing to be desired, as it will surely arrest the hemorrhage as soon as the plug is saturated, and pressure is exerted on the bleeding spot. All local treatment is mechanical by pressure, whether it be the fibrous plug of coajula caused by the styptics or the saturated strip of cotton introduced. Of the mode of introducing the strip of muslin into the nose there is very little to be said. It will be sufficient to say that the end of a strip, half to three-fourths of an inch wide and a yard long, is turned over the end of a small probe and pushed back until it reaches the posterior wall of the pharynx, then fold after fold follows until the whole is introduced. They must remain for twelve to eighteen hours, and then cautiously removed, when it will be found that no hemorrhage will follow.

Of the general or constitutional treatment, that will depend on the state of the health of the patient, its causal relations, and whether the epistaxis is salutary or not. If the epistaxis is frequent and exhausting, every means should be employed, local and general, to arrest it, if otherwise, it should be treated on general principles, when the good judgment of the practitioner will come into service. The points of interest to which I have desired to call attention in this short paper are :

1. That the etiological factors in epistaxis are closely associated, and in sympathy with the system at large.

2. That we must look for them beyond the local symptoms, manifested by hemorrhage.

3. That in many cases it is a salutary process, while in others it is symptomatic of grave disorders.

4. That its therapeutics, to be rational, must be based upon these considerations, and that the value of such therapeutics must be measured by its ability to meet the indications present.

1523 K street, N. W.

HERPES ZOSTER—A CASE.

By WILLIAM F. WAUGH, M.D.

A YOUTH, about sixteen years of age, was seized with this painful affection. Groups of herpetic vesicles presented themselves at several points along the course of the sciatic nerves, in the groin, on the buttocks, along the anterior crural nerve, and on the glans penis. There was also a temperature of 104°, anorexia, great pain, and inability to sleep. An ointment of europhen in petrolatum was applied, and phosphide of zinc given to the amount of 1 grain during one day, in divided doses. The boy was rendered quite comfortable within twenty-four hours, and well in a few days. In this case, at least, the zinc salt appeared to deserve all the encomiums it has received. It seemed to exert an influence over the development of the vesicles almost as decided as that exerted over erysipelas by jaborandi. The europhen gave great relief, but the vesicles continued to develop until the phosphide was given.

An Experiment in Hygiene.—Dr. Takaki, Director-General of the Japanese Navy, has found that the cause of the great mortality on the ships was due to a dietary containing too little nitrogen. Rice, formerly the staple food, was reduced to a minimum, and beef, pork, eggs, etc., substituted, with the result that the disease, kakké, disappeared.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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PHILADELPHIA, October 15, 1892.

THE new clinical amphitheater at the Philadelphia Hospital was opened on Saturday, October 1. Dr. Chas. K. Mills, on behalf of the medical staff, officiated as master of ceremonies. Short addresses were made by Mayor Stuart, Director Lambert, Superintendent Lawrence, Prof. Tyson, John Huggard, and W. D. Gardiner of the Board of Charities, and a brief sketch of the former and present institution, and the illustrious men who had occupied its arena, was read by Dr. Curtin. The audience was then entertained at lunch by the medical staff. Among those present were Drs. Barton, Stubbs, Laplace, Montgomery, Stewart, McKelway, Clara Marshall, Duer, O'Hara, Waugh, Vansant, Andrews, Beecher, Ramsey and Anders. The Resident Physicians, in their neat naval uniforms, officiated most courteously as ushers.

The amphitheater has tiled sides, efficient ventilation, new floors, seats and skylights, and is altogether fitted up in such a style as to make the idea of having a limb subtracted there rather pleasant than otherwise.

Mr. Lambert's short address was delivered in quiet, unassuming style, and couched in well-chosen phraseology, and was listened to with close attention. His program of progress equally in every department of the institution impressed his hearers as meaning more than such speeches usually do; and the public will look with interest on this administration of the city's charities by a man who has won a high reputation in the management of a great business.

Curiously enough, Mr. Gardiner was the only one who spoke of those for whose benefit the whole matter was intended—the patients—and this he did with a touch of sympathy that found an echo in every heart.

Meanwhile, the scribe forgot his business, and instead of jotting down the numerous excellent points in the other addresses, let his thoughts stray back to the times when he sat in that amphitheater and listened to the speakers of other days. Harrison Allen, thoughtful and impressive in his quiet style; Brinton, with his "crow-bar;" Pancoast, with his infectious enthusiasm, florid style, and wonderful results; and last, but not least, that bright, but unfortunate genius, Frank Maury. Who, that ever heard him, could forget him? Or his method of opening a bubo? Or his appearance at a great operation, pale and haggard from walking the floor the livelong night, going over every possibility of the projected operation, his hand shaking until it cluched the knife, when he became firm as a rock?

We may well be proud of our Philadelphia surgeons to-day, but there was plenty of room left vacant for them at the top when Maury died.

CONCERNING CHOLERA.

IN the present number we present our readers a suggestive paper on cholera, by Dr. La Granja, at present residing in Boston. The article has the merit of being written by one who has had considerable experience with the disease in question. Dr. La Granja is a native of

Old Castile, and received his medical education in the schools of Spain and France. He served through the cholera epidemic in Spain in 1885, being, during the existence of the Royal Commission to investigate the preventive inoculations of Ferran, a member of said commission, together with Professors Francisco Alonso Rubio, Aureliano Morestre de San Juan, Alejandro San Martin, of the University of Madrid; Dr. Antonio Mendoza, of the Laboratory of Histo chimie of Madrid, and Professor Eduardo Garcia Sala, of the University of Granada.

Since this time a number of new therapeutic agents have been introduced, as remedies for cholera, such as lysol, salol, etc. Promising as some of these are in theory, not one as yet has received the sanction of pronounced clinical success. The best results have been claimed for salol, and this remedy should not be allowed to fall into disuse on the strength of a few unfavorable cases. This is our national fault, too enthusiastic an acceptance of therapeutic novelties and too great readiness to drop them on the first sign of failure. Very often, even in the hands of illustrious members of our profession, the therapeutic tests are made in a singularly unskilful manner, and in a pessimistic spirit that renders success scarcely possible.

Dr. La Granja's statement in regard to Ferran's inoculations will be read with interest. The point in regard to the impossibility of prevention by inoculation, since cholera itself is not auto-protective, is well taken. Before pinning our faith on any system of inoculation, it seems advisable to ascertain whether an attack of cholera confers any immunity, and if so, for how long a time, and to what degree.

Several extracts on the same subject will be found in the Digest. Believing, as we do, that the probabilities are in favor of our seeing cholera here next summer, the editorial staff has been instructed to note every item of practical value on this subject appearing in the medical journals. Much has been said of Cantani's method, and to-day we present the latest utterances of this great man, taken from a late issue of the *Wochenschrift*.

It is to be hoped that there will be no relaxation in the work of preparing against the threatened invasion, by continuing the cleaning up process so well inaugurated. The example of England, who puts her ports in order and then opens her doors fearlessly to the trade of the infected ports, should not be disregarded. It is wisest, safest, cheapest, to render our cities disease-proof.

Annotations.

W. F. KEENER, the medical book publisher of Chicago, is said to be financially embarrassed because he has trusted many doctors who had not paid for their books.

We are sorry for Keener personally, but it is one way the doctor can help to put down the traveling salesman and drummer, who is getting to be an intolerable nuisance.

TORSION OF DUODENUM.

A VERY curious case occurred recently at the Medico-Chirurgical College in Professor Laplace's ward. A patient came to be operated upon for intestinal obstruction. An incision was made, and the intestine overhauled, foot by foot, until the last knuckle of the duodenum was reached, close to the stomach. This was found to be completely strangulated by torsion. The difficulty was removed, and the patient recovered with no untoward symptoms. The unusual location of the torsion explained an obscure point in the diagnosis—the absence of stercoraceous vomiting. There had been retching, and the return of fluids swallowed, but nothing more.

THE GOLDEN RULE for the physician, whose official duty as health inspector compels him to visit persons being treated by other doctors for infectious diseases, should be to render his service in such a manner as to be thoroughly efficient, and yet acceptable to both doctor and patient. The doctor's

hold on his case should be strengthened by the inspector's visit. The temptation to drop a word derogatory to the medical attendant is sometimes very strong, especially where the latter has grossly neglected his duty. But the doctor who reports his cases places his reputation to that extent in the keeping of the health authorities, and this trust should be loyally kept. There is little difficulty in doing this, if there is inclination and aptitude; if either be lacking, the officer is unfit for the position of inspector.

JUDGING from the following, the present scarlatina epidemic has severely taxed London's hospital capacities:

"The spectacle of hospitals so crowded with the sick that subsequent applications have to be adjourned *sine die* is not a very edifying or a very reassuring spectacle. For this, however, the Metropolitan Asylums Board cannot well be held responsible, though with this distressing precedent in view precautions will, doubtless, be taken to prevent a recurrence of the block. A correspondent, writing to the *Pall Mall Gazette*, calls attention to a state of things at headquarters for which it is less easy to find an excuse. A child is recognized to be suffering from scarlet fever late on Friday night, and a visit is at once paid to the chief office to arrange for immediate removal. As it was about 11.30 P. M., it is no matter for surprise that all the clerks had gone home, but it seems that no business is transacted on Saturday, on which day, according to the caretaker, 'they all leave early,' adding that for certain some one would be in attendance on Monday morning at nine o'clock. Unable to obtain any information as to the proper course to pursue the applicant inquired elsewhere, only to find that application must be made to the Ambulance Association, in Seagrave Road, Fulham, a fact which excited the sarcastic criticism of the *Pall Mall* grumbler. I should hope, for the reputation of the Board, that some qualification of this complaint will be forthcoming. It may be that as there is not even standing room in the hospitals, the clerks do not think it necessary to put in the usual attendance."—*Hospital Gazette.*

Letters to the Editor.

COCAINE POISONING.

DR. BING'S letter, in your journal to-day, relates, without doubt, in my opinion, to a toxic effect of cocaine.

In three papers, by myself—"Cocaine Dosage and Cocaine Addiction," *London Lancet*, May 23, 1887; "Cocaine Toxæmia," *La Tribune Medical*, Paris, January 1, 1888, and "Cocaine Poisoning," *Med. and Surg. Reporter*, October 24, 1891—more than two hundred cases of poisoning by cocaine, including thirteen deaths, are reported. In a fourth paper—soon to appear—more deaths and other toxic cases are cited, making a record that medical men should ever have in mind when using this valued but dangerous—sometimes—drug.

I think your "impression" that "all, or nearly all, the reported cases were persons who could be expected to faint on any suitable occasion," a mistaken one. It will never do to presume that a patient who, by virtue of robust build, is *not* likely to faint, will be proof against the untoward effect of cocaine, for he who puts such an opinion in practice, will run large risk of "coming to grief."

Many of the patients noted in my papers were not subject to syncope, and in the latest reported fatal case in this country—a recent occurrence in Bellevue Hospital—a strong, healthy man, who was given a 4 per cent. solution by urethral injection, died in less than four minutes!

It may not be amiss to repeat the conclusions of my studies in cocaine toxæmia:

1. Cocaine may be toxic.
2. This effect is not rare.
3. There is a lethal dose of cocaine.
4. This dose is uncertain.
5. Dangerous or deadly results may follow doses usually deemed safe.
6. Toxic effects may be sequence of doses large or small, in patients young or old, the feeble or the strong.
7. The danger, near and remote, is greatest when given under the skin.
8. Cardiac or renal weakness increases the risk.
9. Purity of drug will not exempt from ill result.
10. Caution is needful under all conditions.
11. Réclus' method, Corning's device, or Esmarch's bandage, should be used when injecting.
12. Nitrite of amyl, hypodermic morphine, hypodermic ether, alcohol, ammonia and caffeine should be at command.

MATTISON,

Med. Director, Brooklyn Home for Habitués.

BROOKLYN AVENUE, BROOKLYN.

COCCYODYNIA.

OCCASIONALLY patients come to me suffering from acute pain and tenderness in the region of the coccyx, excited especially from pressure, as in sitting on an unyielding surface or on arising from a sitting to a standing position.

Several such cases have come under my care within the last few years, nearly all of whom had failed to get relief from purely drug medication. Knowing this to be a neurosis, I saw no reason why galvanism, properly applied, would not be rational treatment. This I have used in each case, and as yet with uniform success, even in a case of traumatic origin. A young lady, while skating, fell, alighting in a sitting posture, and the following summer, while in the country, was thrown against a post, further injuring the part, when she became my patient, and was cured after less than three weeks daily applications of the constant current; with no recurrence after a lapse of five years.

Another case, that of a young lady aged thirty-three years, professional nurse, nervous temperament, was operated upon three years ago for rectal fistula, after which this coccygeal pain and tenderness intervened, becoming progressively worse until the early summer of this year, she suffered almost constantly in any position she could assume, except that of standing. After five weeks treatment she returned to her work. A letter received yesterday from her, an extract from which I quote, tells the result in her own words:

"I want to take this occasion of telling you that I consider myself cured by your electrical treatment. You know how greatly discouraged I was, and sometimes I must have seemed ungrateful for your kind efforts in my behalf, now I can say joyfully, you cured me. I have not suffered at all since I came here, and it seems almost incredible that I can sit on a hard wooden chair with ease and comfort. No one can realize how happy I am to be released from that agonizing pain."

The mode of application I made in these cases was to apply the anode against the coccyx, cathode under the feet. A weak stabile current—slightly perceptible to the patient—from five to eight minutes, repeated daily six times a week. If any painful or tender spots along spine, I give spinal applications as well; descending current. If anæmia or other disturbance of a general system, I attend to such before treating locally. General faradization with other constitutional tonics often help as preliminaries in such cases.

TRUMAN COATES, M.D.
RUSSELLVILLE, PA.

THE USES OF DIGITALIS.

WHATEVER gives more power to the heart's action, and to the contraction of the arterioles, increases the pressure of the vessels on the blood and strengthens the pulse; and whatever enfeebles the heart, and the dilatation of the arterioles, lessens the pressure and impairs the pulse. Digitalis is a cardiac tonic, and a medicinal substitute for muscular exercise. It controls the blood pressure, and governs the heart's contractions, without hindering its dilatation. This is accomplished by means of its power over the vaso-motor nerves, and its direct influence on the walls of the vessels. It regulates discrepancies between the pulse and the heart-beat, and restores the simultaneous contraction of the ventricles, when their action is unequal. Digitalis is serviceable in palpitation, irregularity, irritability, and intermittence. It is helpful in simple dilatation; in mitral regurgitation and stenosis; in aortic disease (but needs caution in aortic regurgitation and stenosis); in hypertrophy (if small doses are used); in pericarditis; in cardiac asthma; in the heart failure incidental to pneumonia (unless there be excessive congestion, or too much blood in the right heart); and often in epistaxis, menorrhagia, exophthalmic goitre, typhus, typhoid, and scarlet fevers. By its diuretic effect it alleviates Bright's disease, cardiac, and scarlatinal dropsy; by regulating blood-flow to the surface it lowers the temperature in adynamic fevers; by its sedative action it is valuable in delirium tremens; and by increasing pressure, and urging the blood through the pulmonary vessels it relieves dyspnœa. Iodide of potassium acts somewhat like digitalis, besides promoting absorption, and the two frequently make an excellent combination. Digitalis is not advisable in affections of the left ventricle; in fatty heart; nor in any case where the arterial wells are diseased. In large doses it lowers blood-pressure, and weakens the pulse by expanding and paralyzing the

arterioles; and, if pushed further, it excites vomiting, diarrhœa, diuresis (followed by suppression), relaxation of muscles, disturbances of vision, dyspnœa, and eventually death through heart failure. When freely administered the patient should remain in the recumbent position. The antidotes include tea, tannin, aconite, and stimulants.

LOUIS LEWIS, M. D.

MY PILL.

IN a practice of over twenty years I have never met with anything the equal of this pill to check fluxes of the bowels, such as dysentery, diarrhœa, bloody flux, cholerine, intestinal tuberculosis, etc., and believing it to be superior to all other similar remedies vaunted for cholera, herein make it known:

℞.—Pulv. opii.,
Pulv. plumb. acetat.,
Camphor gum.....āā gr. xxx.
Fl. ext. capsicum..... gtt. x.
Beechwood creosote..... gtt. v.
Alcohol q. s. to dissolve camphor.
M. F.—Pills No. 30.
Sig. One to 6 pills a day, according to the urgency of the case.

J. ZACK. TAYLOR, M.D.,
DEALS ISLAND, MD.

The Medical Digest.

FOR earache, apply 6 per cent. solution of cocaine, or 20 per cent. solution of carbolic acid in glycerin.

A RARE case of tuberculosis of the stomach is reported in a woman of fifty-eight years. She had been ailing four months. Œdema had set in both legs, but it disappeared before death. The post-mortem showed stomach somewhat dilated, and its pyloric and ulceration, with thickening of the edges in places. By the microscope this was found to be tuberculous. Suppurating caseous glands stretched along spine behind the pancreas, and also in the right axilla.

SURGEON BEATTY of the British Navy, recommended the use of a bag—sewed edgewise—holding about three pounds of shot, and filled to its full capacity, for the relief of constipation. This somewhat globular and yielding mass is to be rolled over the abdomen by the patient while he lies supine, before rising in the morning, and again at night. He cites the case of a woman where about three weeks' use produced a cure.

ELECTRIC LIGHT AS AN ANODYNE.—Dr. Gatchkowski reports twenty-seven cases in which he used electric light therapeutically with great success. The battery used was of three volts strong. An electric lamp of six volts produces hyperæmia, and, in some cases, even burning. The light must be snow-white—light with a yellowish or reddish tint has no curative effect. Usually, the effect is produced in about four, five, or ten minutes.

Rheumatic and nervous pains are easier amenable to this treatment than inflammatory pain. A sensation of warmth is usually experienced by the patient; at times, that of cold. In some cases, the pain leaves the original seat after the application of electricity, and moves away to some other part. Tinnitus aurium, due to diseased process of the middle ear, was cured by the light. In most of the cases, the pain entirely disappeared after a few applications.—*Vratch*, N. 30, 1892.

HEMORRHAGE THROUGH UNINJURED SKIN.—Dr. Derabin reports a case of a girl, eighteen years old, whom he found sitting with head bent over a basin and hands outstretched. From the anterior surface of the clavicular region, from the extremities of the fingers, palmar surface, and from the tip of the nose, flowed a stream of blood, now forcibly throwing the stream one foot high, then oozing in drops. From the tip of the nose the blood came in one thick stream; from the extremities in thin drops and streamlets. The bleeding continued, with a few short intervals, for four hours. No injury of the skin could be detected. A drop of coagulated blood remained on the tip of the nose, which, in a few days, disappeared, leaving a deep red stain. The symptoms of acute anemia appeared on the following day, which, however, disappeared in four days. Examination of lungs revealed nothing. It happened for the first time, and did not coincide with her menstrual period.

—*Vratch*, N. 31, 1892.

UNUSUAL TERMINATION OF A CASE OF CANCRUM ORIS.—A female child of three years was admitted into a London hospital for treatment of a livid red swelling of the right cheek, nearly the whole of the inner

surface being gangrenous. There was slight enlargement of the gland at the angles of the jaw, and the temperature 99.2°. The gangrenous tissue was treated with nitric acid and dressed with iodoform, the child being placed face downward to prevent, if possible, inhalation of septic material. After two days the temperature was normal, and so continued. A small scale of exfoliated bone was removed from the alveolus of the upper jaw on the eighteenth day. A month after admission only a scar remained on the mucous membrane of the cheek. The child appeared in perfect health, when, four days later, it vomited without apparent cause. Next day it became drowsy, with repeated vomiting, dilated pupils, and occasional periods of great excitement and terror, apparently connected with visual hallucinations. During the next twenty-four hours it passed into a partial coma, lying with wide open eyes, noticing nothing, with an occasional piercing inarticulate cry and divergent squint. The conjunctivæ were injected, pupils contracted without reaction to light, respiration was sighing, pulse irregular and rapid, and the temperature rose suddenly to 102.2°. Intense optic neuritis was found in both eyes, with large flame-shaped retinal hemorrhages. Twenty hours later the child died, without developing any further paralysis, eruption, or rigidity of the neck, the temperature rising to 102° just before death, having previously fallen to 96°. Secretion of urine was very scanty, but albumen was absent even in that removed from the bladder after death.

The clinical and pathological evidence shows that death was due to sudden onset of septicæmia, causing general encephalitis and tubular nephritis. It is a good illustration of the process of "secondary infection," in which putrefactive organisms obtain an entry through the lesion caused by a primary, but independent, disease, and cause septicæmia or pyæmia; and the gravity of the prognosis in cancrum oris, the patient not being out of danger even after apparently complete recovery. In this case the organisms probably remained latent in some thrombosed vein in the cheek, and when the clot gave way they were discharged into the circulation. The presence of extensive nephritis, without albuminuria or œdema, presents a condition of great interest. It would seem that lesion of the vessels of the skin is a necessary factor in producing albuminuria, and that unless a simultaneous lesion of the cutaneous vessels is present, albumen may be absent from the urine in cases of nephritis.

PUERPERAL ECLAMPSIA.—A woman (primipara) of twenty-four years, subject to headaches (had measles when young), but otherwise healthy, was delivered Monday, 1.30 A.M., of a full timed child, the after-birth following immediately, succeeded by some vomiting. During the latter part of the present pregnancy she suffered from dizziness, loss of vision, and severe headache, which was worse when patient was recumbent. Her catamenia were usually regular, and she had an abortion a year ago. There was no history of epilepsy.

At 1 P. M. Monday I found her progressing favorably, but very shortly she had three attacks of convulsions within one hour. Consciousness returned not till fits entirely left her. Enema of brom. potass. and chloral, hot bottles, poultices over the loins, extra clothing. Fits ceased for a few hours, then recurred every hour, although the above enema was continued, and also occasionally administered by mouth, till 4 P. M. Tuesday.

Pilocarpine (gr. $\frac{1}{15}$) injected into arm, and as temperature was 103° F., the uterus was cautiously washed out with weak Condy's fluid. The effect of pilocarpine on the heart recalled to mind the pulse and heart sounds at termination of a fatal case of diphtheria. No convulsions for two hours, and then a slight one. Another enema at 7 P. M., and obtained then two ounces of urine (the previous urination was unconsciously) for examination. The deposit of urates was thick; nitric acid and heat tests revealed albumen in large quantities.

Wednesday: The patient improved, although unable to speak. Tossed about like one who had suffered from hemorrhage; signs of returning consciousness; temperature normal.

Thursday: Iodide and brom. potass. given by mouth; uterus washed out with Condy's fluid.

Friday: Patient sitting up in bed and eating; complained of frontal and vertical headache.

Saturday: Much improvement; examination of urine showed urates, but no trace of albumen. Henceforward only

dietetic treatment; cut off the hair to relieve headache.

The advantages resulting from the judicious use of pilocarpine, and the possibility of fright determining the disease in a predisposed subject, is here apparent. I had thoughtlessly alarmed the mother by hinting at the doubtful viability of her infant.

—T. Dobson Poole, in *Brit. Med. Jour.*

Heat Apoplexy; Hyperpyrexia; Death.—A woman, of twenty-six years, was seized with faintness and vomiting, followed by convulsive twitching. Soon her condition was comatose, with stertorous breathing; arms and legs helpless, knee-jerks abolished, and plantar reflex gone. Pulse 100, fair volume and not labored; pupils contracted and inactive to light; face gorged with blood; hands white; temperature 107.8°; respiration shallow. Powdered ice in a cloth to the head, and ice to other parts of body. She soon vomited greenish biliary matter; urine and fæces passed involuntarily. No improvement occurring, hypodermic injection 3 grains antipyrin. Thirty minutes afterward temperature 99°; breathing less labored; vomiting continued. Five and a half hours from commencement of attack, temperature 103.8°; pulse 88, small and hard. Croton oil ♏ij given by mouth. Lapse of a few hours; a very slight return of consciousness; temperature 101°. About twelve hours later (dawn) temperature 104°; pulse beginning to fall, very rapid; respiration labored. Injection 3 grains antipyrin; croton oil (by mouth) ♏ij; brief period of slight improvement; vomiting less frequent, but much mucus obstructing respiration, and *râles* in the chest. Breathing more abdominal. Brandy, a teaspoonful every hour during the day; but toward evening she could not swallow, and began to sink thirty-six hours after attack; temperature now abnormal.

Observations.—1. It is not high dry heat, but damp heat (95° Fahr.) that usually causes heat apoplexy.

2. The reduction, when impossible to effect through drugs by mouth, of temperature by hypodermic injection of antipyrine.

3. More depletory measures were here contra-indications, as the patient was in enfeebled health, and suffering from secondary syphilis. The lack of improvement, despite the reduction of temperature, in the peripheral circulation, the blanched hands, the congested face, the rapidity with which the lungs gorged, suggest paralysis of the nerve centers and loss of tone of vessels.

—E. C. Williams, in *Brit. Med. Jour.*

Ascaris Lumbricoides in Typhoid Fever.—A probable case of this complication is that of a boy of fourteen years, and of good family history. On November 23, 1891, he was suffering from the prodromatous symptoms of typhoid fever, with pale face, dark lips, scanty, high-colored urine, and severe typical diarrhœa. The temperature was characteristic during course of the disease, rising each evening to fall again next morning, and reaching a maximum of 104.2°. The tongue furred at the sides and clear at the tip and middle. On the tenth day the "spots" appeared on the abdomen. The case progressed favorably, defervescence occurring by lysis. After sixteen days, December 26, temperature went up, and diarrhœa returned with its former severity. The symptoms ran a shorter course, and the patient again convalesced. January 12, 1892, again indications of the disease, but no special symptom till the 18th, when he passed a large round worm about eleven inches long. Thence he fully convalesced.

Treatment.—In the early stages of the disease, an ordinary saline mixture, with two minims tincture aconite every four hours, and 10-grain powders of salicylate of soda thrice daily. Only a simple milk diet allowed. From November 25 an active delirium continued for some days, for which was given a sedative draught containing bromide of potassium, and tincture of henbane, to be taken at night as required. As the diarrhœa was now uncontrollable, tincture of iodine and carbolic acid were administered with good results, one minim of the tincture and one-eighth grain of the acid thrice daily, the doses being doubled after three days.

During the convalescence an acid mixture, with sulphate of quinine, was given. On recurrence of symptoms former treatment was again used with equal success, and also in the second relapse. After voiding the worm no other passed, although ordinary vermifuge was taken. Only stimulant given during attacks was a teaspoonful of hot milk every hour, or less.

Usual hygienic measures applied, the stools being received into Condy's fluid. The fever had ordinary course till first relapse, caused by a chill through the patient's imprudence. Second relapse attributed to the parasite, and the question arises whether both cases were not due to same cause.

—J. S. Reynolds, in *Brit. Med. Jour.*

Artificial Immunization of Animals Against Cholera.— Klemperer finds that, from cultures of cholera vibrio kept for two hours at a temperature of 70°., within seventeen hours of the injection of 2.5 cubic centimeters into the peritoneal cavity of guinea-pigs, immunity is established. He also finds that the serum of immunized rabbits makes guinea-pigs proof against deadly doses of virulent cultures, if the inoculation is made into the peritoneal cavity three hours before the injection of the virulent material. He has discovered that injections of protective cultures confer immunity against intoxication through the digestive canal, but in such case a higher degree of protection is required. He found that by introducing the protective substances into the stomach the animals were rendered immune against deadly doses of the virus, for, on third day after the introduction of 5 to 8 cubic centimeters of cultures, kept at 70° C. for two hours, immunity was so perfect that they could bear the deadly dose given either intraperitoneally or by the stomach. To insure this success, 5 cubic centimeters of soda solution were given before the ingestion of the protective substances.

Klemperer found that immunity could be produced by electrized cultures. By subjecting bouillon cultures to the action of a constant current of 20 milliampères for twenty-four hours, the bacilli were killed, whilst the poison was so weakened that the culture was found suitable as a protective substance.

Brieger and Wassermann inject 4 cubic centimeters of a culture into the peritoneal cavity of guinea-pigs on four consecutive days, when immunity is established even against a dose of the poison, triple the strength of that which kills "controls" in twelve hours. At the suggestion of Koch they tried the effect of cholera vibrios cultivated in bouillon, and heated on the following day to 65° C. for fifteen minutes, in their quest after the minimum dose of an inoculating fluid necessary to make a guinea pig immune to an undoubted fatal dose of virulent cholera cultures. Guinea-pigs thus treated showed themselves refractory to doses of cholera culture double in amount to those which sufficed to kill "controls." The smallest dose of the bouillon cultures required to render them immune was 2 cubic centimeters. In two days after the infection, the animals were rendered refractory. At the expiration of nearly two months, double the deadly dose of cholera poison was injected, without any ill effect, the "controls," on the other hand, all dying on the next day.—*Brit. Med. Jour.*

Treatment of Epilepsy with the Pasteur Antirabic Injections —A. de Giovanni has used this treatment on a woman subject for five years past to fits, —lately to five or six daily—maniacal attacks, impairment of speech, stupor, etc. On and after the second day there was a steady improvement in all the symptoms; and a permanent cure appears to have been accomplished.

Arrest of Vomiting in Animals. — Sabbatani has induced vomiting in six dogs through hypodermic injections of apomorphine, and stopped the vomit in two of them through inhalation of chloroform vapor; in two, by use of a sponge saturated with ammonia, held close to the nose, and in two, by applying the faradic current. The human being he found less tractable, succeeding in only two cases out of five.

Exalgin in Chorea.—Dana believes exalgin has specific effects in ordinary chorea. His treatment consists of two grains thrice daily, increasing the dose, if necessary, to three grains five times daily, plus iron after meals. Average duration of the chorea was five weeks. The only unpleasant symptoms during treatment were acute anæmia and cyanosis.

Chloroform in Cholera.—Desprez in his treatment aims at the destruction of the common bacilli in digestive tract and neutralization of their products of secretion; the subduing of the painful spasms of the stomach; the stimulation of the functions of the skin and the introduction into the system, as soon as absorption is possible, of remedies capable

of restoring the normal composition of the blood. To attain these points his compound is:

℞.—Chloroform ..... ♏ 1.
Alcohol ..... " 8.
Acetate of ammonia ..... " 10.
Water ..... " 110.
Syrups of hydrochlorate of morphine " 40.
M. One tablespoonful every half hour till relief.

Preventive treatment for persons in contact with cholera patients, half a glass of chloroform water (one to two per cent.), sweetened and taken several times a day.

Orexin Hydrochlorate.—Conflicting testimony as to the value of this drug as a stomachic and aid to digestion, induced A. Rizzi to experiment it on healthy subjects in whom he found that it caused appearance of keen hunger, and produced increase both of the secretory energy and of the peristaltic movements of the stomach. Next on patients troubled with atonic dyspepsia, complicated or not with anæmia, he had striking results. Gastralgia or hyperæsthesia of the gastric mucous membrane should, however, be taken as contra-indications to the use of orexin, as it may be a great irritant. It should be administered in form of powder, enclosed in wafers, and its ingestion be promptly followed by a draught of water or broth, in order to prevent the drug localizing itself in any one part of the stomach, and exercising there a strong irritant action.

Bromide of Strontium, or Bromide of Potassium for Epilepsy.—Deny has treated, during the seven months ending with July 1, 1892, seven epileptics with bromide or strontium. During this time the total number of fits was two hundred and forty-six. In the corresponding period of 1890 91, they were treated with bromide of potassium, and had as total number of fits, three hundred and eighty-one, a difference of eighty five in favor of strontium as a remedy. Both drugs were given in identical doses. Bromidism did not appear. One patient previously subject to maniacal excitement after each epileptic fit was now freed from that consequence.

Deny thinks brom. strontium a valuable auxiliary to brom. potass. in treatment of epilepsy, and even more effectual in decreasing the number of fits, while per contra Vallon has discontinued brom. strontium in three cases where the fits seemed increased in number by it.

Appendicitis.—Cases requiring operation may be classified into three groups:

1. Those in which pus can be diagnosed with something like certainty.

2. Those in which, from the acuteness of the symptoms, perforation or gangrene of the appendix may be regarded as imminent, if it has not already happened.

3. Those in which prolonged rest, blistering, etc., fails to prevent relapse.

In class 1 the indications for operation may be: The presence of a distinct tumor increasing in size despite treatment; increasing tenderness, hectic temperature, and perhaps redness, œdema, or fluctuation. The operation consists in cutting down on the most prominent part of the tumor, evacuating the pus, and removing the appendix, if it presents itself easily and is found to be diseased. The abscess sac will generally be found adherent to the abdominal wall so that the general cavity of the peritoneum is not opened. The cavity must be drained.

In class 2 the attack generally has a very acute commencement, pain is very marked, and tenderness at McBurney's point is extreme. Tumor there may be none to be felt unless the patient is examined under an anæsthetic. The temperature will generally be elevated to 102° or 103°, and the pulse will be unduly quick in proportion to the temperature. At the same time the patient looks ill. These acute symptoms continuing, and especially if there is even a commencement of distension, operation should be resorted to, and this is especially true of children. An incision should be made in the right semi-lunar line, pus evacuated if it is found, the appendix removed if this can be done without any great disturbance of parts. The greatest care should be taken to prevent fouling the general cavity of the peritoneum. The wound should be closed, except for the space occupied by a glass drainage tube.

In class 3, if prolonged rest in bed, with blisters and salines, fails to give relief, especially if there be a succession of relapses, operation is called for much on the lines laid down for class 2, but operation should not be resorted to until rest has had a thorough chance of effecting a cure.—Lennox Browne, *Med. Press.*

MASSAGE IN MEGRIM.—During the past few years I have examined physically the abdomens of forty-six individuals suffering from megrim before, during and after the paroxysms, varying in intensity from slight hemicrania to the most severe attacks of pain involving cerebral complications of great variety. In fourteen cases the clinical symptoms have been supplemented by the use of the salol test, and in six the salol rhubarb, and Günzberg's tests.

In thirty-two of the cases I examined the abdomen once only before, during, and promptly after the attack. In all the stomach appeared flaccid, inert, lying in a flabby atonic condition in the epigastric region, and encroaching on the hypogastric and both hypochondriac regions beyond the normal limits of the healthy viscus; no scaphoid appearance present, the profile of the abdomen being pear-shaped, the greatest convexity being in the hypogastric and iliac regions.

To the hand-touch the sensation is one of flaccidity and relaxation rather than that of distension. The "stomach splash" is readily elicited, and found to extend beyond the limits of the healthy organ. On percussion the stomach-note is often found to extend high up into the chest on the left side as well as low down into the hypogastric and over into the right hypochondriac region. The small intestines are distended with gas, and the flanks sometimes present same appearance as in dilatation of colon.

In the thirty-two cases the period of gastro-intestinal inertia has been synchronous with the severe headache, and has been followed by renewed activity of the organs and often by vomiting, retching, or by the expulsion of gas or fæces *per rectum*.

In the fourteen cases more than one opportunity offering for abdominal examination, in the intervals immediately before, during and after a paroxysm, the physical signs have been found constant in so far as they relate to the duration of the paroxysm and immediately before and after the same; but in the intervals the conditions varied from distinct dilatation of the stomach in some to apparently normal in one.

The patients agree that the earliest warning of a paroxysm is localized in the stomach, for instance, uneasiness, nausea, and with some few gnawing, sinking sensation in pit of stomach,

Thirty-one out of the forty-six were visually disturbed, and these sensations, present as a premonitory sign, differed in intensity and duration, in some amounting to scotoma or hemiopsia, in others taking the form of a colored Catherine wheel, whirling around on the opposite side of the field of vision to that part of the head which subsequently becomes the pain center. In only two cases have I been able to arrest the progress of a paroxysm after the patient has experienced this symptom. As the nausea increases the pain in the head becomes more marked. In all the cases but one the initial pain is unilateral, frequently commencing behind the ears or in the occiput. In the one case—of twenty-five years' standing—it was present over both temples.

Synchronously with the establishment of the pain, the physical signs and the subjective symptoms in the abdomen undergo a marked change. If in the interval of the headaches the dilatation of the stomach has been absent, it becomes distinct during the paroxysm. The lower limit of stomach-splashing sound may reach two fingers' breadths below the navel (in one case I found it three). During the dilatation of the stomach some patients complain of sinking sensation in the abdomen, and are so fully aware of the impossibility of digesting food that they decline to attempt ingestion, not only because of nausea, but from experience that no assimilation of food can occur. When this sensation passes away, frequently vomiting, or if the stomach is empty, retching occurs within following twelve hours.

Food taken one hour or more before the paroxysm will be found, when vomited, half-digested, sour in smell, and either intensely acid or bitter to taste. If the patient has taken food after the premonitory signs of an attack, the vomit will show that no digestion has occurred.

Sometimes the retching or the vomiting relieves the headache, but in the majority relief is only temporary. In six cases relief always came after a stool, preceded by conscious peristaltic action.

The relaxation of the stomach, with the condition of aperistalsis throughout the intestinal tract, has always been preceded by varying intervals of irregular peristalsis of the bowels.

In the fourteen cases dilatation of the stomach has been recognized by careful

percussion and palpation of the abdomen, and especially by noting the limits of the stomach-splashing sound, which, produced by the impingement of the fingertips perpendicularly on the abdominal wall overlying the stomach, is easily distinguishable by the practised ear from the wave splashing against the upper or cardiac wall of the stomach, which may be produced by *contre-coup* when firm pressure is made on the abdominal wall below or outside of the stomach limit.

Besides the use of physical examination, both with and without blowing up the stomach, in fourteen cases the salol test has been employed and confirmed the evidence of physical examination as to the fact of delay in the evacuation of the gastric contents into the intestine during the attack of headache. In six cases the rhubarb test for gastric absorption has been employed, and Günzberg's capsule has also been used after a test-breakfast, with a view to ascertain, without washing out the stomach, the condition of the digestion during the attacks and in the intervals. The failure of permanent results is due to the fact that the patients perforce returned to conditions of life inimical to health.

If megrim is a neurosis, then there is some evidence to show that the irritation of the gastric periphery of the vagus is the exciting cause of the head pains and other symptoms of nerve irritation accompanying the paroxysm; that stimulation of the vagus branches to the stomach by ill digested food is followed by irritation of the sensory nerves to the scalp, the nerve-impulse initiated in the gastric fibers being referred to the periphery of the same nerve in the temporal and occipital regions.

Although the initial irritation of the vagus in the stomach may alone suffice to cause the head pain, observation of phenomena attendant on megrim points to absorption of toxic matters into the circulation, and irritation of the nerve centers by the products of albuminoid decomposition not arrested in the liver. In the slight attacks evidence of vagus irritation is to be had in the flatulence, nausea, etc., followed by unilateral headache and relaxation or dilatation of the stomach. In serious attacks the dry, furred tongue, sour or bitter taste, visual disturbance, sallow complexion, dull eye, contracted pupil and jaundiced conjunctiva apparently point to the absorption of some toxic product into the system; while some phenomena attending paroxysms of megrim bear much resemblance to those described by Brunton in his recent work "Relationship Between Chemical Structure and Physiological Action." Indeed, in many cases I have observed a train of symptoms similar to those attributed to the action of certain ptomaines. For instance, contraction of the pupils of the eyes, hemiopsia, salivation, lachrymation and perspiration, gradual decrease of the heart's action down to 60, 50, and lower at close of a paroxysm, with frequent micturition and apparently complete paralysis of gastro-intestinal movements.

Again, in regard to the reference of stimulation from the gastric branches of the vagus to the sensory fibers of the same nerve in the head, the summation of stimuli may produce the paralysis of the vagus branches to the abdominal viscera, causing relaxation or dilatation of the stomach and intestinal aperistalsis; and prolonged irritation doubtless produced a diffusion of nerve impulses beyond the limit of the vagus distribution.

The usual site of pain is over either temple. Sometimes the pain commences in, or is transferred to, the occipital and mastoid regions; frequently it is felt in temple and occiput synchronously.

Physiologists state that some fibers of the auricular branch of the vagus (Arnold's nerve) are sensory. Irritation of this nerve in the meatus causes vomiting. It is as reasonable, therefore, to suppose that the undue stimulation mentioned will cause pain in the regions supplied by fibres from Arnold's nerve in the head, as that irritation of certain fibers of this nerve supplied to the meatus auditorious causes vomiting.

The appearance of patients having megrim, points to the formation and absorption of poison in the stomach, and the conditions are those which lend themselves to the origination of toxic by-products in feeble digestion. Gastric irritation as immediate cause of megrim does not involve the rejection of the theories of vaso-motor, malarial, and uric acid origin of unilateral headache. Per contra these factors may co-exist as cause or causes, with gastric disturbance.

I have frequently observed the association of megrim and malarial fever with disordered digestion. I never suffer from

ague without a severe temporal headache occurring with the rigor, and attended by a sense of abdominal constriction and nausea. Many of the vascular theories on the etiology of megrim appear equally explicable by the recognition of the abdominal vascular conditions present at the onset of a paroxysm.

The cause of excessive uricacidæmia is recognized by Dr. Alex. Haig ("Uric Acid") as existing in disordered digestion, and the remedies not only affect uric acid conditions, but act on stomach secretions and contents in a way favorable to improvement of gastric digestion. He advises nitro-hydrochloric acid before, and salicylate of sodium after, the meals, though, as to the latter drug, he finds its use incompatible with existence of nausea. Dyspepsia or abdominal uneasiness affords the earliest warning of an attack of megrim, and, provided it has not continued too long unchecked, the paroxysm may be arrested by evacuating the contents of the stomach and administering a small dose of salicylate of bismuth as a gastric disinfectant.

So far as drugs avail, I find largely-diluted doses of hydrochloric acid given with the meals, followed by a capsule containing beta-naphthol shortly after, useful in preventing the dyspeptic conditions causative by paroxysmal hemicrania. Valuable as are medicaments and dietetics in megrim, there are many cases which yield not to these means alone. Admitting that megrim is due to deranged digestion, in the sense that coupled with sluggish portal circulation, there is interference with the quantity or quality, or both, of the gastric secretion, that with this insufficiency of secretion there is also inactivity of the gastro-intestinal motor apparatus, permitting the generation, accumulation and absorption of toxic matters in excess, so that the liver is unable to cope with them; it seems that the indications of treatment are to improve the circulation through the chylopoetic viscera, and at same time to aid the activity of the liver in preventing the intrusion of leucomaines and ptomaines, while a diet of a kind easily assimilated is prescribed.

The indications point to rest in a recumbent position, and massage with suitable diet and such drugs as may assist in preventing the formation of toxic matters in stomach and intestines. Massage of the abdomen will serve to assist peristaltic action, to assist the liver, to aid the circulation of the blood and hepatic secretion through the organ so as to favor excretion of matters taken up by bile which may not have been rendered inocuous in the liver. Massage of the whole body is still more to be commended.

As regards dietary, milk is valuable, though frequently it is necessary to sterilize or peptonize it. Much care is needed in regard to vegetables. If, after each meal, the patient is given abdominal massage for a period varying according to the state of the viscera, much good will result.

Coldness of extremities and body surface must be avoided, and if a paroxysm threatens, the stomach may be washed out by administration of hot water or by means of a tube and saline solution. Then, after gentle massage of the abdomen, the patient should be provided with hot applications to the nape of the neck, to the abdomen and extremities. It is useless to give either food or drugs during the period of gastric paralysis.

Oftentimes the first sign of renewed motivity is the onset of retching and vomiting, when the administration of a few pints of hot water will be valuable in stimulating peristalsis, and subsequently soothing the irritated viscus.

The urine should be examined daily, as it sometimes happens that after the taking of salol, the drug is not entirely eliminated the same day, and if it is being used for test or antiseptic purposes, the slow elimination may lead to overdosage.
—A. Symons Eccles, in *The Practitioner*.

Dr. Kudrasheo reports a case of hard chancre on the genitals of a child, a boy, two years and ten months old. The dry nurse had been treated for syphilis a few months before she had entered upon her services. Dr. Kudrasheo presumes the mechanism of infection to have been either immoral intercourse, or sucking the penis of the child to induce sleep, a method, the doctor says, frequently used by nurses.—*Vratch*, N. 31, 1892.

For rheumatism, Staples recommends the local use of equal parts of olive oil and oil of gaultheria.
—*St. Louis Med. Era.*

ELASTIC CONSTRICTION.—1. The use of the elastic bandage to secure a bloodless condition of a limb should be discarded, as compression of the parts affected may produce mechanically dissemination of malignant tumors and microbic diseases.

2. A bloodless condition should be secured by elevation of the limb prior to constriction.

3. Constriction should be made with sufficient force to interrupt at once both the arterial and venous circulation.

4. Prevent venous stasis by constricting quickly, beginning pressure on the side of the limb supplied with the principal blood-vessels.

5. Linear or too firm constriction should be avoided, as they are liable to give rise to muscular injury and temporary or permanent paralysis due to harmful compression of a large nerve-trunk.

6. Elastic constriction of a limb for hæmostatic purposes should be diffused over an annular space not less than two inches in width, and can be made with least danger of injuring important structures by an elastic band made for this purpose, or an ordinary elastic bandage.

7. Circular constriction of a limb should be made, if possible, at a point where the large nerve trunks are well protected by overlying muscles, and if this cannot be done on account of the site of operation, a thick compress of gauze should be interposed between the constrictor and the limb.

8. The vitality of the tissues when excluded from the circulation is endangered by prolonging the ischæmic condition for three or four hours, and gangrene may take place if constriction is continued for a longer time.

9. The process of karyokinesis in tissues temporarily deprived of circulation by elastic constriction, is unfavorably affected if constriction is continued for more than two hours.

—N. Senn, in *Ft. Wayne Jour.*

TOXIC NEPHRITIS.—The prognosis depends upon the amount of urine passed in twenty-four hours, and the quantity of blood and of albumen which it contains. The more prolonged the disease, the greater is the chance of repair taking place, so that our efforts must be directed towards gaining time.

The best aim of treatment is to find a substance which, eliminated by the kidneys, can do a kind of substituted work in the epithelium, or a substance capable of acting after the manner of turpentine, which, in twenty-four hours causes indigo to disappear from the urine of the horse. At present we know little of substances of this nature, but there is every reason to believe that they exist, and we already have a proof of this in the action of turpentine upon the epithelium of the uriniferous tubules in the normal state, and upon the same elements after poisoning by phosphorus. I shall take some future opportunity of showing you the good effects of cantharides in primary epithelial nephritis.

When the poison has been neutralized, and its immediate effects combated, it remains for us to treat the effects of the renal lesion, namely, troubles produced by urinary insufficiency. An exclusive diet of unboiled milk, by reason of its diuretic properties, and perhaps also on account of its action upon the renal epithelium, is the most appropriate. If this does not succeed, drastic purgatives are indicated, together with the use of diuretics. It often happens, however, as the epithelium is the element specially affected, that the best diuretics,—squills, digitalis, and caffeine—fail to act, and, then as we shall no doubt have an opportunity of seeing, the tincture of cantharides, apart from cases of poisoning by this substance, may be of service.

I shall show you on another occasion that the affections we are now discussing may serve as the type of others; thus the nephritis of phosphorus poisoning has the closest analogy with that of yellow fever, mercurial nephritis with that of typhoid fever, and that produced by cantharides with primary epithelial nephritis.

—Lancereaux, *Med. Press.*

IODOFORM IN TUBERCULOUS JOINTS.—Case VI shows that even in advanced tuberculosis of joints gratifying results may be obtained by this method of treatment. Harry P., tuberculosis of knee joint with sinus, erosion of cartilage and osseal necrosis.

Joint was opened and necrosed tissue removed with sharp spoon; cavity thoroughly washed out with antiseptic solution, filled with iodoform emulsion and packed with gauze, antiseptic dressings applied and bandaged. Ten days after the dressings were removed and injection

repeated. The injections were continued at intervals of three weeks, and at the expiration of six months the case was discharged with firm ankylosis of knee. This was a case in which resection was apparently indicated, and the injections were employed to ascertain what effect they would have upon this case. The result was equally as satisfactory as could have been obtained by resorting to resection. It is not claimed by the advocates of this method of treating tuberculous joints that it is applicable to all cases, or that it will in all instances prove a success. But that it is a safe, satisfactory and justifiable method of treatment in the great majority of such cases, especially in the early stage of the disease before ulceration and necrosis have taken place or are too far advanced. Moreover, the claim is made that accumulating experiences abundantly substantiate and demonstrate the truth of this proposition. —Wyatt, *St. Louis Med. and Surg. Jour.*

Case of Double Tubal Gestation. —Dr. Walter reports the case of a woman of twenty-nine years, who had been married ten years, and had had five pregnancies. Abdominal section was performed. The uterus was in normal position and not enlarged. A tense cystic swelling was felt in the left broad ligament and a similar one on the right side, behind the uterus. Found the right Fallopian tube distended with blood. The right ovary was adherent to the tube, and was smaller than normal, but otherwise healthy. The left ovary was small and flattened, and so adherent low down in the broad ligament that removal was not attempted.

The patient soon recovered from the effects of the operation, but complained of pain and sickness for several days. Concerning the temperature and the pulse there was little to note. The day after the operation menstruation began, and lasted three days ; as soon as it ceased the sickness stopped. Regarding the parts removed: of the two Fallopian tubes (both were occluded and distended), the left was found divided in its whole length, and mainly occupied by an apoplectic ovum ; the amniotic cavity was occupied by an embryo 6 cm. long, and was thoroughly saturated with blood. The right tube was occupied by a tubal mole, the amniotic cavity persistent, and no embryo detected. The pregnancy in the left tube was more advanced than that in the right. No decision was reached as to whether impregnation occurred in each tube about the same time. Dr. Walters knows of but one other indisputable case of concurrent pregnancy in both Fallopian tubes of the same person. It is reported by Mackenrodt in a woman of thirty-two years. In May, 1890, she was seized with symptoms indicating rupture of a gravid tube ; operation refused. October, 1891, she was seized again with these symptoms. Abdominal section showed a gestation sac the size of a goose's egg ; it was removed from the left side. On the right side a second sac was found ; it contained fœtal bones. The patient recovered.

—*Brit. Med. Jour.*

Bactericidal Action of Alexin. —E. H. Hankin shows that proteoid substances — known as alexin—capable of killing bacteria, can be obtained from the bodies of various animals. In seeking for alexin among the allies of fibrin ferment, he used as tests rabbit's serum, through which he passed about fifteen sparks of high potential power from an electrical machine (Winshurst) with the result that the bactericidal power on anthrax was as great as that of normal serum. In the case of rat's serum subjected to the same test, the bactericidal power was slightly decreased.

The bacteria-killing properties of pure alexin solutions were removed through the action of a few electric sparks, and found to furnish an excellent culture medium. The plate culture method of estimating the bactericidal power of the solution being preferred, he found a gradual decrease in the numbers of colonies from ordinary alexin solution, and on the other hand, the solution, subjected to passage of the electric sparks, had no power to prevent the increase in the number of colonies. He preferred the anthrax bacillus as one capable of resisting the action of change of medium.

—*Brit. Med. Jour.*

Diabetes Insipidus occurring in children in India is attributed to hot weather, and lasts sometimes for months. In spite of high fever accompanying it, the passing great quantity of water, the little patients have general good health, and present nothing abnormal in any organ.

This diuresis of limpid urine of specific gravity, but little above that of water, seems synchronous with the fever.

Treatment:—Tincture belladonna pushed to complete dilatation of the pupils. This effects a complete cure.

GRAMMATIKATI finds that if the removal of the ovaries is complete, it is frequently followed by menstrual molimina, lasting for a few months. Then appear climacteric troubles; sometimes melancholia. Remarkable deposits of fat occur, and not from excess of nutrition. The removal of the uterus without the ovaries causes serious effects, especially in the young. He insists, therefore, in their case, that the ovaries should also be removed. From his investigations, it appears that the ovaries do not atrophy if left behind.

THERAPEUTIC NOTES.—*Phenocoll hydrochloride* has been tested by Dr. Brun as a remedy in rheumatism, neuralgia, hectic fever, and erysipelas. In pulmonary consumption it proved a reliable antipyretic, in doses of 8 grains, but is not to be used in the later stages. The same dose proved very successful in hemicrania, but not in myelitis or ischias. In rheumatism and erysipelas the good effects were not decided. But little disturbance of the heart or stomach was caused.

Subgallate of bismuth is given by Colosanti in profuse catarrhal or ulcerative diarrhœa, and in infectious summer diarrhœa. In daily doses of 30 to 90 grains, divided into powders of 4 to 8 grains, it was found equally efficacious in colliquative consumptive, diarrhœa, that of typhoid, dysenteric enterocolitis, diarrhœa or dysentery of malaria, and that occurring in convalescence from fevers.

Piperazine has been used by Schweninger in one hundred and fifty cases of gout, and is pronounced of enormous value as a palliative. He gives 15 to 30 grains daily until the acute symptoms are relieved, followed by smaller doses for some time. He also uses hypos of gr. 1½, in 10 per cent. solution, two or three times a day. This method is effective in removing calcareous deposits and relieving renal colic.

Pental is highly praised as an anæsthetic for minor surgery by Hollænder, who prefers it to bromide of ethyl. Pental is unsuitable for very excitable or anemic persons.

Sozal is obtained by dissolving aluminium hydrate in phenol-sulphonic acid. It has been injected with success in purulent masses, tuberculous ulcers and cystic affections, in 1 per cent. solution; although the bacteriological investigation condemns it.

Chloroform has been given by Werner in typhoid fever, in doses of one or two tablespoonfuls of the 1 per cent. solution as often as every hour. It is thought to act as an intestinal antiseptic.

—*Provincial Med. Journal.*

For burns, Bardeleben recommends the application of a 3 per cent. carbolic, or 30 per cent. salicylic acid solution—never a sublimate—then opening the blebs and dusting with bismuth. Over this a thick layer of cotton may be applied.

Typhoid fever sometimes runs a febrile course. Wendland reports two cases in which the diagnosis, made in the absence of the typical fever, was confirmed by the autopsy.

BED-CLOTHING FOR THE SICK.—In hospital, as well as in private practice, great errors are made in the matter of bed clothing for the sick, and particularly for the sick who are suffering from febrile affections. We have got rid of the heavy curtains around the bed; of the grand accumulator of dust and other uncleanliness, the tester; of the heavy vallance which converted the under-part of the bed into a close cupboard, in which all kinds of unwholesome and cumbrous articles lay concealed, including sometimes excreted matter itself; and we have banished the carpet, which, often as a hard-trodden dust-laden rag, made the floor beneath the bed persistently impure. This is all good reform, but we have still not advanced sufficiently in the reforms necessary for bed and bedding. The old feather beds, flock mattresses, heavy blankets, thick, impermeable, and dense counterpanes, still encumber many a patient, rendering ventilation of his body as impossible as in the days of our forefathers. It does not indeed seem as yet to have been accepted by physicians, still less by nurses and patients, that the body calls for ventilation; that a bedroom or ward may be the purest in a general point of view, and yet that the advantage which ought to arise may be considerably curtailed by

the unwholesomeness of the bed and bedding, and by the patient making an unwholesome atmosphere for himself in his immediate surroundings. The universal improvement that is now called for in the direction named consists in substituting porosity for density in all articles of bedding. The thick dense bed and mattress require to be replaced by the light steel elastic bed; and the clothing under and upon the patient, now so close and heavy, requires to be replaced by clothing that is porous, so that it can be permeated with pure air from without, and can at the same time permit the warm and impure air from the patient to have free exit. Under such conditions of clothing there is a double current of gases going on in the clothes, which is most purifying, cooling, and refreshing; the noxious odors which so easily accumulate under dense bedclothes have then no abiding-place; and febrile heat is dispersed instead of being retained as an addition to the evil that already exists.

The mistake now so generally made lies in the idea that the warmth which the bed calls for is best obtained by close material and close packing. The error is positive. There is nothing that retains warmth in so good and equable a manner as common air at rest. Dense materials, as Count Rumford demonstrated, cannot keep the body respirably warm. If they are non-conductors they may retain the heat, but then they retain also the cutaneous transpiration; whilst air, a splendid non-conductor, permits the freest diffusion of cutaneous emanations. Materials, therefore, both for the bed and for the bed-clothing, ought to be porous to a free mechanical extent of porosity. The rule holds good for the clothing of the body in health; in sickness it is imperative.

—*Asclepiad.*

METHYLENE FOR INTERNAL ADMINISTRATION.—Methylene bichloride, commonly called methylene, a substance made by the reduction of chloroform under the action of zinc, and which I brought out as a general anæsthetic in the year 1865, has up to the present time been employed only as an anæsthetic. I wish now to intimate that it has many properties which commend it for administration in solution alone or in combination. Methylene is a little more soluble in water than chloroform, is pleasanter to the taste, and blends more easily with other medicinal fluids. The dose of it runs from 5 minims to 30, and in the largest of these doses it is agreeable to take when freely diluted with water. In action it is antiseptic, slightly stimulant, antispasmodic, and anodyne. Its antiseptic properties are remarkable, and, in combination with peroxide of hydrogen, it forms perhaps the best of all antiseptic combinations. In typhoid I believe it to be by far the best. The prescription runs as follows:

℞.—Methyleni bichloridi..... ℥j.
Solut. hydrogenii peroxid (10 vol.) ℥j.
Acid hydrochlori diluti..... ♏xxx.
Aquæ destillatæ.....ad ℥vj.
Fiat mistura. A twelfth part to be taken in half a tumbler of pure water every three hours, or as directed.

This mixture may be used by the patient as if it were a simple drink. It does not interfere with the action of food; the tongue becomes clean under it, and the pyrexia falls. The same solution may also be administered, in typhoid, by enema. As an antiseptic and antispasmodic methylene goes well with infusion of cinchona, with or without mineral acid. It joins equally well with soda salicylate in the treatment of acute rheumatic fever, when, with the pyrexiā and swollen joints, there is much pain.

There are some other methods of employing methylene, as in combination with ammonia, and with narcotics like opium and cannabis indica; but my principal object in this opusculum is to draw attention to its service, in combination with hydrogen peroxide, in the treatment of typhoid. I would not, in this stage of inquiry, venture to say that typhoid can be aborted by this treatment, but I am satisfied that under it we are approaching very near to the right plan, and that by industry in this line of inquiry we cannot fail to arrive at remarkable results. The treatment may be designated as antiseptic oxygenation.—*Asclepiad.*

STYPTIC COLLOID WITH CALOMEL OR WITH MERCURY BICHLORIDE.—In cases of phagedænic ulceration and of syphilitic sore, styptic colloid as an application goes excellently with calomel. The combination can be made in one or two ways. The calomel can be lightly dusted over the ulcerated surface in an even layer, and the styptic can then be painted over the surface with a camel's-hair pencil;

or the calomel can be well admixed with the colloid in the proportion of three grains to the fluiddrachm of colloid, and a portion of the mixture can be painted over the affected part. In examples of ulcerated fauces from specific disease, the application of calomel in this manner performs a double service: it acts locally, and, by absorption, generally.

Mercury bichloride can, in like manner, be used in combination with styptic colloid in the proportion of one grain of the sublimate to two fluidounces of the styptic. In the solution so formed, there is sufficient alcohol to take up the sublimate, and there is no action on the tannin or collodion to cause precipitation. A few minims of this solution can be laid over an ulcerating or suppurating surface with a brush, or the solution can be applied on thin layers of cotton wool as a dressing that can be removed and renewed as required.—*Asclepiad.*

Drunk or Dying.—The uncertainty of diagnosis in head injuries has once more been illustrated by a case that recently occurred at the San Francisco Receiving Hospital. On September 3, 1892, M. C. Shaw, aged thirty-seven, a civil engineer by profession, was knocked down by a cable car. He was dazed by the blow, but seemed to recover consciousness in a few minutes. The patrol wagon was summoned, and, though he protested he was not hurt, and wanted to go home, his friends thought best to bring him to the hospital. The assistant surgeon on duty found several abrasions and contusions about the forehead, but no certain signs of serious injury. The patient, however, presented apparent symptoms of intoxication. He had walked into the hospital with a slightly unsteady gait, talked a great deal, declaring that it was nonsense to dress the abrasions on his head, took money from his pockets to pay the surgeon and steward for their trouble, and in many ways acted as an intoxicated person would. From the nature of the accident, however, the surgeon suspected that there might be internal injuries, and accordingly entered the diagnosis on the books as "doubtful." The man was placed in the hospital ward and kept for observation. He appeared to fall asleep at once, but never awoke. Six hours after entering he died. A post-mortem examination showed fracture at the base of the skull, in the occipital bone. The external injuries were all in the fore part of the head, and as the occipital region showed no wound, the fracture was evidently from contre-coup.

—*Occidental Med. Times.*

Hydrocele.—Dr. W. Joseph Hearn has hit upon the best operation. He cuts down upon the sac, and, catching it, makes a hole sufficiently large to permit the introduction of a small mop of cotton; after the serum is drawn out, he *dries* the cavity by means of sterile cotton, and then swabs it out with deliquescent carbolic acid; a small piece of bichloride gauze is introduced in the opening in the sac in order to facilitate drainage, and an antiseptic dressing is applied. At the end of twenty-four hours, the capillary drain is removed, and the case goes on to an uninterrupted recovery. The drainage prevents the accumulation of the inflammatory products; and its subsequent solidification permits of and favors complete collapse of the sac, diminishes the infiltration of the scrotal connective tissues by favoring the removal of infiltrated serum, which must of necessity develop during the first twenty-four to thirty-six hours through the drainage path. This operation, in Dr. Hearn's hands, has proven successful, and is, I believe, from a scientific standpoint, the most valuable operation which we possess. An essential feature, of course, is thorough and efficient antisepsis.—*Va. Med. Monthly.*

Worcester Sauce in Sea-sickness.—Dr. Miller, of Largs, recommends Worcester sauce, in teaspoonful doses, given without water, for preventing and curing sea-sickness. It should be given every three hours until the stomach can tolerate and retain its contents. Avoid stimulants, but give small quantities of good beef tea with cayenne pepper in it. This remedy is easily obtained on most steamers, pleasant to take, and has often succeeded when all other means have failed. In some cases he recommends the application of a tightly-applied bandage, rest on the right side, and frequent small quantities of fluid food.

Blackbeetles as a Medicine.—A doctor, in the "Annual of the Universal Medical Sciences," has employed blackbeetles as a diuretic with considerable

success. For the last four years he has carefully studied their action in hospital practice, and regards them as valuable in cardiac dropsy in doses of ½ grain. There is something so unpleasant about the very idea of swallowing blackbeetles that this diuretic will not become popular. We should consider it more likely to prove a good emetic.—*Pop. Med. Monthly.*

THE TREATMENT OF CHOLERA MORBUS.—Dr. Richard Van Santvoord said that acute diarrhœa might be divided into two forms, connected by intermediate cases of mixed character:

1. Acute dyspeptic or irritative diarrhœa, being caused by taking some indigestible substance which underwent fermentation and putrefaction.

2. The cholera group, including, especially, Asiatic cholera.

These had also been spoken of as the toxic diarrhœas, the toxic matter being generated by microbes. In irritative forms of diarrhœa a variety of bacteria might develop and add to the symptoms.

In diarrhœa due to cholera morbus, it was usual to rely upon evacuants, stimulants, aromatics, and antiseptics. Opium, given before the bowel had been cleared, worked injury by locking up the irritant, whereas, later it was curative because, as the author thought, acting as a physiological antidote to the poisonous ptomaines. To effect this object it should be given in full doses for a short period. Alkalies and aromatics probably acted similarly to opium, though being less efficient, they were not applicable alone in severer toxic cases. It had been supposed that aromatics were intestinal antiseptics, but it was questionable whether they reached the point at which they could thus act. As to antiseptic remedies, such as salol, hyposulphite of soda, salicylate of soda, napthalin, mercurial preparations, etc., he had been disappointed in all. Subnitrate of bismuth, which the author thought acted in part, at least, as an antiseptic, had been the only exception. It was useful in less severe cases where opium was not indicated, and in others after this remedy had done its work. He also advised washing out the lower bowel. In infants, the absolute withdrawal of milk might be indicated Good stomach digestion should be secured by pepsin, etc. The author thought physicians were guilty often of not following up their cases of diarrhœa, especially in children, leaving them to the care of the mother after the worst was over, and the case becoming chronic, often ended in permanent injury to the health. —*Med. Record.*

GENERAL WILE'S CHOLERA REMEDY:

℞.—Tinct. camphoræ,
Tinct. capsici,
Tinct. rhei,
Tinct. opii..... āā ℥ss.

M.—S. A teaspoonful in a little hot water, repeated every hour, or oftener, till reaction takes place.

Brandy and whiskey, heat and friction over the bowels and extremities are valuable.—*The Prescription.*

AN ANTI-CHOLERAIC MIXTURE.—The most useful anti-choleraic mixture I have ever employed is one in which creasote is combined with opium, on the method first suggested by the late Mr. H. Stephens, and, quite independently, by Mr. Spinks, of Warrington. The formula I prescribe runs as follows:

℞.—Creasoti puri..... ♏xij.
Tinct. camph. co ..... ℥vj.
Spirit. ether. chlor..... ℥iv.
Syrup. rhœodos..... ℥ij.

M. Ft.—The mixture—twelve doses. One fluid-drachm, or a teaspoonful to be taken every hour, or as may be directed, in half a tumbler of water.

—*Asclepiad.*

CANTANI'S TREATMENT OF CHOLERA.—Cholera epidemics vary in their characteristics. There is one kind characterized by the coagulation of the blood, resulting from the loss of water and acid in the system. There is a kind evidenced by the intoxication resulting from the cholera poison. There is the epidemic in which very many patients collapse, and die before attaining the point of blood coagulation. Indications of treatment are: To limit the growth of bacilli in the intestine; to neutralize the chemical poison; to eliminate the absorbed poison; and to counteract the coagulation of the blood. The therapeutic importance of these indications are obvious, *i. e.*, the rendering inert the poison in the intestine before it can be absorbed in the blood, and the necessity of confining the coagulation to the earlist stages; of subduing the disease in the stage of acute infectious catarrh of the duodenum (Magendarm). In the initial stage the first two indica-

tions are carried out by large and hot rectal injections of tannic acid (5, 10 to 20 g. to 1½ to 2 liters water at 39° C.), to which about 25 drops laudanum may be added. He believes the resistance of the ileo cæcal valve may be conquered, and the fluid find its way into the small intestine. The injections are used after each stool, usually about every four hours. He tries to show that with this treatment in the early stage of cholera diarrhœa nearly every case recovers. The tannic acid kills the bacilli and lessens their toxic effects. The only medicines by the mouth are wine, dilute hydrochloric and lactic acids. In the algid stage the only resource for combating the poisoning and thickening of the blood is the addition of water to the blood and tissues. Regarding the injections of hot saline fluids into the subcutaneous tissue, much as half a liter may be injected into two places at a time. They should not be made into the region of the neck. They are of most use at the commencement of the algid stage, and of little use before fluid has been lost to the blood. These injections are preferable to intra-mixture with the blood. The hot rectal injections should be continued, as they also supply fluid. When these are used early the necessity for hot subcutaneous injections is not so frequent, but is essential when the blood has thickened. External applications of warmth is not so efficient as these hot rectal and hypodermic injections, and when the blood has thickened a hot bath may be injurious. He considers, however, that the rectal injections are more efficient than the subcutaneous. These should be continued in the reaction stage in order to get rid of the waste products in the tissues. He has little confidence in protective inoculation.—*Berliner Klin. Wochenschrift.*

News and Miscellany.

The Germantown Hospital issues an appeal for aid.

Dr. A. M. Owens, of Evansville, has been visiting New York.

In St. Petersburg cholera stools are emptied into huge cauldrons and boiled. Examinations made after boiling show that the stools are thereby completely sterilized.

Dr. E. T. Reichert has severed his connection with the *Medical and Surgical Reporter.*

The *St. Louis Medical Era* appears on our exchange table; a monthly, edited by S. C. Martin, M.D.

The *Chicago Clinical Review* makes its bow; monthly, edited by Drs. G. H. Cleveland and A. J. Boufflers.

Dr. W. C. Wile, of the *New England Medical Monthly*, has been elected Surgeon-General of the Grand Army of the Republic.

English carpet makers are trying to get up a scare concerning the possible importation of disease germs from the barbaric East, on carpets and rugs.

Dr. J. R. Mansfield, a homœopathist of Germantown, has been sued by a neighbor, who demands $50,000 for the alienation of his wife's affections.

A Milk Epidemic of Scarlet Fever.—Nearly forty cases of scarlet fever in Leyton, England, have been traced by the medical officer of the Local Board to milk supplied by one dealer, and to one of the farms that supplied him, where several members of the family were suffering from the disease.

Medical Women in Bosnia.—Bosnia has enacted a law for the appointment of a medical woman to the capital of each district, with the official title of *Wundärztin*, *i.e.*, a grade lower than that of Doctor of Medicine. The yearly salary is about 1500 gulden.

Prof. G. Croom Robertson.—The death of George Croom Robertson, late Professor of Philosophy in University College, London, and editor of *Mind*, is announced. Mr. Robertson was in his fifty-first year. His writings in the domain cognate to mental physiology and alienism were marked by ability.

Among the charities receiving legacies from Mrs. Emily T. Eckert, are the Maternity Hospital ($5,000); Howard ($5,000); German ($10,000); Episcopal ($5,000); Germantown ($5,000); Wills ($5,000); Home for Incurables ($5,000); and the Presbyterian Hospital, that comes in for $179,500.

PROPRIETARY MEDICINES CONTAINING POISON.—Last July, the Council of the Pharmaceutical Society of Great Britain authorized legal proceeding against several of the largest retail dealers in London, to stop the sale of chlorodyne. Each of the firms, under legal advice, paid the penalties without going into court. When penalties under the Pharmacy Act are thus paid, no publication of the names of the offending persons is allowable.

THE fall course of lectures at the Wagner Free Institute of Science, Montgomery avenue and Seventeenth street, opened October 5. Dr. Henry Leffman will lecture on Wednesdays on Chemistry; Dr. Frances Emily White, on Thursdays, commencing October 13, on Physiology; Prof. Scott, of Princeton University, on Fridays, on Geology, commencing October 7. Each course consists of ten lectures, and certificates of proficiency will be given to those passing satisfactory examinations. Besides the regular lectures, the trustees will arrange a series of Saturday evening lectures on popular topics.

INSANITARY DWELLINGS AND RESPONSIBILITY OF OWNERS.—The coroner in Oldham, England, has hit upon a novel device, worthy of consideration by coroners everywhere, in cases where death has appeared due to insanitary conditions of the dwelling. He summoned the owner to the inquest as a witness. The unpleasant publicity thus conferred upon owners of such properties it is thought will arouse in them a sense of their moral responsibility, in lieu of the lack of legal liability.

AT the recent meeting of the American Electro-therapeutic Association, the following officers were elected for 1893:

President, Dr. Augustin H. Goelet, of New York; First Vice-President, Dr. William F. Hutchinson, of Providence, R. I.; Second Vice-President, Dr. W. J. Herdman, of Ann Arbor, Michigan; Secretary, Dr. M. A. Cleaves, of New York; Treasurer, Dr. R. J. Nunn, of Savannah, Ga.; Executive Committee: Dr. W. J. Norton, N. Y.; Dr. G. Betton Massey, Philadelphia; Dr. Robert Newman, New York; Dr. Charles R. Dickson, Toronto, Canada; Dr. J. H. Kellogg, Battle Creek, Mich.

Next place of meeting, Philadelphia, on Tuesday following meeting of Pan-American Congress.

A "SPITTING" CRUSADE—A Society for the Prevention of Spitting is the latest suggestion. The object aimed at is somewhat radical as long as imperfect man remains subject to catarrhal infirmities. Nevertheless, considering the teachings of bacteriology, the efforts of some street car companies and of some railroads to stop the nuisance of spitting in their cars are worthy of praise. The special notice published by the State (Penna.) Board of Health, specifying the sanitary dangers of indiscriminate expectoration, it is hoped will be soon posted in all the public schools.

CLINICAL SOCIETY OF MARYLAND.—The two hundred and sixty-ninth regular meeting was called to order by the President, Robert W. Johnson, at Baltimore, October 7, 1892.

The reports of the Treasurer showed the Society to be in a flourishing financial condition.

The following officers were elected for the ensuing year:

President, William E. Moseley; Vice-President, J. Mason Hundley; Recording Secretary, William T. Watson; Corresponding Secretary, Edwin K. Ballard. Finance Committee: (New member), George H. Rohé. Executive Committee: George Flemming, J. M. T. Finney, Harry Friedenwald.

W. T. WATSON, *Secretary.*

DR. ELIZABETH BLACKWELL, after refusal of admission to matriculation by a number of colleges, finally got into one which thereby made the initiative in the reception of women. One morning the lady was missed at the anatomy lecture; the lecturer explained that, as they were approaching delicate subjects, he had advised her to absent herself. As she had paid for a full course, she offered, if she were likely to embarrass him, to remove her bonnet and take a back seat. She trusted that his interest in his subject would cause him to forget her presence. She received an ovation from her fellow-students, and, in due course, took the first medical diploma granted in the United States to a woman.

OF INTEREST TO MEDICAL STUDENTS.—The winter clinics of the Philadelphia Hospital commenced on Saturday, October 8. The first day's lectures were as follows: Professor E. E. Montgomery, of

Jefferson College, on "Diseases of Women;" Dr. Roland G. Curtin, of the University of Pennsylvania, on "Diseases of the Chest;" and Dr. Joseph Hearn, of Jefferson College, on "Surgery." The clinics will be held every Wednesday and Saturday throughout the winter, and will be free to all registered medical students of any school.

The clinical amphitheatre has been completely remodeled, and is now regarded as one of the handsomest and most complete in the city. It has been built as nearly antiseptic as possible. The floors are of solid cement, and the walls of cream-colored tiling, the steps of iron, and the seats of polished oak, while the shelving is entirely of glass. The room is lighted by electricity, and is perfectly ventilated. It has a seating capacity for two hundred and fifty students.

The Bureau of Charities has decided to continue the ward classes during the present winter, under the condition that the classes be conducted only by a member of the visiting staff of the Philadelphia Hospital.

THE Medical Health Officer, County Essex, England, attributes a sporadic outbreak of diphtheria in a village at confluence of Blackwater river and the North Sea, to the effluvium caused by the unloading of some cargoes of putrified fish and London manure, and by carting of the same to the farms. He does not believe specific infection from a pre-existing case necessary to cause an outbreak.

ELEVENTH INTERNATIONAL CONGRESS.—As a recent notice in this journal has informed our readers, the Eleventh International Congress will meet in Rome, Italy, from September 24 to October 1, 1893. By an official letter, dated August 22, 1892, and signed by Professor Guido Baccelli, President, and Professor E. Maragliano, Secretary-General, Doctor A. Jacobi, of New York, has been directed to form an American sub-committee. Its membership is not yet complete, but on it are already found, beside that of the Chairman, the names of Doctors William Osler, of Baltimore; S. C. Busey, of Washington; N. S. Davis, of Chicago; Charles A. L. Reed, of Cincinnati; William Pepper, of Philadelphia; F. Peyre Porcher, of Charleston; James Stewart, of Montreal; and Alexander J. C. Skene, of Brooklyn, New York. In the interest of facilitating the trip to Italy and reducing the expense, arrangements will be made with the steamship companies. According to a communication from the Central Committee contained in a letter of the Secretary-General's, dated September 14, the North German Lloyd proposes to reduce the fare to Genoa by 20 per cent., and that of the return trip by 10 per cent. It is expected that still more favorable terms will be secured.

THE Philadelphia medical and dental schools entered upon their regular winter term October 4, which, with the exception of the Christmas holidays, will continue until about the end of April next. During the summer recess the different college buildings have been put into thorough repair, and they expect to open with large classes. Hundreds of students have already arrived, and others will reach the city in the course of the month. The college courses generally were opened yesterday with introductory lectures.

The introductory to the course at the Jefferson College was delivered October 3, in the clinic hall of the hospital building, by Professor Hobart A Hare, M.D., in the presence of a large audience.

At the Medico Chirurgical College the address was by Professor Samuel Wolfe, M.D., of the Chair of Physiology, whose subject was "Professional Character."

Dr. John Ashhurst, Jr., opened the one hundred and forty-second annual session of the University of Pennsylvania, October 3, at noon. An address was also made by Provost Pepper. The freshmen class in medicine is said to number over 300; in dentistry, 70; veterinary, 35.

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S. Navy for the week ending October 8, 1892.

KENNEDY, R. M., Assistant-Surgeon. From the Training Ship "Richmond," and to the Coast Survey Steamer "Bache."

WALTON, T. C, Medical Inspector. Ordered to the Naval Academy.

KIDDER, B. H., Medical Director. From the Naval Academy, and to the Naval Station at Port Royal, S. C.

ARNOLD, W. F., Passed Assistant-Surgeon. From the Naval Station at Port Royal, and to the U. S. S. "Richmond."

The Times and Register.

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PAGE

ORIGINAL ARTICLES:

TREATMENT OF TYPHOID FEVER. By D. M. Barkley, M.D. - - - - - - - - - - - - - - - - - 447
THE THERAPEUTIC APPLICATION OF SALOPHEN. By Dr. Josef. Frohlich - - - - - - - - - - - - 449

EDITORIAL:

CITY DRAINAGE AND WATER SUPPLY - - - - - - 456

ANNOTATION:

Smoke for Tubercular Phthisis - - - - - - - - - 457

LETTERS TO THE EDITOR:

Plethora and Pruritus. *Nolan* - - - - - - - - - 457
Rhumatic Fever. *Bryant* - - - - - - - - - - - 457
Rheumatoid Arthritis. *Coates* - - - - - - - - - 458
Morphine Habitués. *Mattison* - - - - - - - - - 458
Treatment of Acute Rheumatism. *Frankhauser* - 459
Rheumatism. *Brucker* - - - - - - - - - - - - 459

BOOK NOTICES:

Darwin and After Darwin. *Romanes* - - - - - - - 460
A Manual of Medical Jurisprudence and Toxicology. *Chapman* - - - - - - - - - - - - - - - 460
Gonorrhœa and Urethritis. *Lydston* - - - - - - - 460
"Anatomia Completa del Hombre." *Martinez* - - 460

PAGE

La Revista Medico Quirurgica Americana. *Milliken and Salicrup* - - - - - - - - - - - - - - - 460
Medical Matters Mentioned in Jest. *Lelah* - - - 460

THE MEDICAL DIGEST:

Treatment of Cholera (*Peter*)—Cholera Treatment (*Gaillard*)—Chronic Consumption Late in Life (*Mackenzie*)—Gonorrhœal Septicæmia (*Rugy*)—Immunity Against Typhoid (*Bruschettini*)—Aconite Poisoning (*Robinson*)—Reflex Spasm of the Glottis Following Distension of the Stomach (*The Lancet*)—Glycosuria with Low Specific Gravity of the Urine (*Nicholson*)—Treatment of Filaria Sanguinis Hominis (*Manson*)—Ipecacuanha in Dysentery (*Hart*)—Myxœdema (*Brown-Séquard and d'Arsouval*)—Treatment of Apparent Death in Drowning (*Laborde*)—Yawning as a Therapeutic Measure (*Naegeli*)—Hydrastis Canadensis in the Treatment of the Vomiting of Pregnancy (*Fedorow*)—Paralysis Agitans (*Charcot*)—Subcutaneous Injections of Digitalis (*Zienetz*)—Treatment of Professional Spasms (*Benedict*)—Treatment of Zona (*Brocq*)—Pills for the Pains of Post partem Uterine Colic (*Rutherford*) - - - - - - - - - 460–468

NEWS AND MISCELLANY - - - - - - - - - - 468

NOTES AND ITEMS - - - - - - - - - - iv, viii, x

Original Articles.

TREATMENT OF TYPHOID FEVER.

BY D. M. BARKLEY, M.D.,
CASEYVILLE, KY.

IN compliance with your kind invitation in October 8 number of TIMES AND REGISTER I submit the following on typhoid fever. It is the Western treatment, if I may so term it. Quite a number of medical journals in the last four years have contained articles on the subject. While some of the articles are perhaps somewhat too sanguine, all, however, concur in the superiority of the treatment to all others that have been offered to the medical profession. I have tried and tested it for three years in quite a number of cases of typhoid fever, probably twenty to twenty-five, and I can truly say that the results are most satisfactory. The treatment is based upon scientific principles, such as are now recognized by the advanced men in the medical profession. All intelligent physicians know that the fever is caused by the bacillus typhosus, generating a ptomaine typhotoxic, producing the aggregation of symptoms called typhoid fever. The treatment heretofore had been largely symptomatic, not based upon any scientific or pathological principle, but since the discovery of antiseptics a more rational and sensible treatment has come into vogue. Now our medical journals and medical teachers are proclaiming "intestinal antisepsis" as the basis or principle of all treatment. A number of antiseptics are recommended, which I will enumerate in the order of their true value: Salicylates of ammonia, soda and bismuth, sulpho-carbolate of zinc, sulphite of soda, carbolic acid, iodine, salol, spts. of cinnamon, etc., etc.

If it were possible to apply our antiseptics only to the diseased portion of the bowel, Peyers' glands, as we do to all external wounds and sores, we could soon

bring about a cure, but as most of our antiseptics are soluble (except salicylate of bismuth and salol) they are absorbed by the stomach and intestines, and fail to reach the exact locality of the lesion, consequently we have to be satisfied with an incomplete local antisepsis, but we will find that even this is the best, and that we can accomplish as much by soluble antiseptics as by insoluble ones.

With this introduction I beg leave to submit the following treatment to the consideration of the medical world, promising that it is not the result of a few months' observation, but the patient result of three years' trial in a number of cases, twenty-five. After giving the treatment I will speak of results and discuss remedies used. Upon seeing a case of typhoid fever, or a suspected one, the following is prescribed:

℞.—Ammoniæ salicylatis..... 3j.
Sod. salicylatis ..... 3ss.
Acetanilid (anti-febrine)..... gr. xxiv
M. et. ft.—Chart No. xii.
Sig. Give every three hours a powder dissolved in an ounce of hot water, with 6 to 10 drops of the spirits of cinnamon (U. S. D.). Add a little cold water to the above.

If the bowels are bound up give a Seidlitz powder, or a dose of castor oil and glycerine (ää) one tablespoonful, and repeated in four hours if necessary. Give after midnight for several succeeding nights 20 grains of quinine at one dose, with sufficient lemonade or toddy to dissolve it in the stomach. Quinine best given in capsules. Have the nurse to take the temperature and pulse every three hours, and keep a written record of them, as for instance: 9 A.M., temperature 102, pulse 78; 12 M., temperature $102\frac{3}{5}$, pulse 78, and so on through the whole course of the disease.

The above is the general treatment. As for special treatment of symptoms the following plan is followed: For diarrhœa the following is used:

℞.—Bismuth salicylate..... 3j.
Sod. bicarb..... gr. xx.
Sod. sulphitis..... gr. xx.
Pulv. opii..... gr. v.
M. et. ft.—Chart vel. capsulæ x.
Sig. Give a powder or capsule every six hours.

For a red tongue let the patient drink freely of lemonade for two or three days, until the alkalinity of the blood is neutralized, or changed to an acid condition, which will be indicated by the tongue losing its red color and becoming pale. The bowels are to be kept open with castor oil and glycerine if they are costive. For tympanites give sulphite of soda, 10 grains, three to four times a day in drinking water. For sordes wash the mouth with sol. peroxide hydrogen and listerine, or carbolic acid in glass of water, 10 to 15 drops. For insomnia ⅛ to ¼ grain morphine.

Dietetic treatment consists in giving a glass of milk every four to six hours, with 10 grains of lactopeptine, alternated with other liquid food, such as soups, bovinine, tea and coffee, etc.

I promised to speak of remedies and results after giving treatment. As to the salicylate of ammonia, the experience of a number of medical men, as I gather from the medical journals, is uniform that it is the prince of antiseptics in typhoid fever, destroying all bacilli or microbes in the alimentary canal and completely disinfecting the bowel. The salicylate of soda, in addition to its antiseptic properties, is diaphoretic, and with acetanelide will eliminate through the skin the toxic products of the bacillus typhosus. The spirits of cinnamon is said by French physicians to destroy the typhoid bacillus; it is gently stomachic. The salicylate of bismuth is the ideal intestinal antiseptic, and combined with the bicarb. soda (to neutralize the free salicylic acid in the bismuth) and with the sulphite of soda, will so completely disinfect the stools of typhoid fever that not an odor can be detected by the most sensitive nose. Besides being insoluble, it will be carried on through the bowel, and as it passes over the ulcerated glands of Peyer, it will there exert its germicide properties on the bacillus.

Now as to results. After three years of trial I am willing to affirm that typhoid fever can be brought to an end, and convalescence established at the end of fifteen to seventeen days if the treatment is commenced at the beginning, and it is best to put all suspicious cases on the above treatment when first seen.

Among other results of the above treatment I have uniformly observed these: No tympanites, no delirium, no subsultus tendinum, no picking at bedclothes, no diarrhœa, no dry tongue, no sordes; but, on the other hand, a feeling of comfort, calm refreshing sleep, a fair appetite, warm moist skin, very little trouble to the nurse, whose usual answer to the question "How is our patient getting along?" is

"the best kind." I give plenty of good cistern water to drink with pure ice if desired. I give above my experience with the Western treatment of typhoid fever. There is not a word or statement I would retract or modify.

THE THERAPEUTIC APPLICATION OF SALOPHEN.[1]

By Dr. JOSEF. FROHLICH.

I SELECTED as the subjects for my first experiments eleven cases of acute and six cases of chronic articular rheumatism, choosing chiefly those which were characterized by high fever, severe involvement of numerous joints, and especially by extensive intra-articular effusions, or those which were attended with cardiac complications. In the chronic cases I paid especial attention to those which previously had been treated with other preparations of salicylic acid, in order to compare the efficacy of the latter with that of salophen. In acute as well as in chronic rheumatism affections I commenced usually with a daily dose 6.0 gm. (90 grains) which was increased to 7.0 gm. (105 grains) in a few cases, and after subsidence of the acute symptoms reduced the dose to 4.0 gm. (60 grains) per die, which was gradually continued until a recurrence was no longer to be feared.

In a second series of experiments, comprising seven cases, I tested the antipyretic effect of salophen, and employed it for this purpose in various febrile conditions, especially in phthisis attended with fever, measles, erysipelas, and intestinal affections of a febrile character. I began with a dose of 3.0 gm. (45 grains) which was increased to 6.0 (90 grains) per day, *i.e.*, by addition of 1.0 gm. (15 grains) daily to the dose, the remedy being administered every two hours, or the entire daily dose being given in the course of three to four hours in order that the effect of salophen might be determined during the rest of the day.

A third series of experiments was undertaken with the view of investigating the disinfectant and antiseptic properties of this new salicylic acid preparation. The facts that salophen in alkaline solution gives off an abundance of salicylic acid, and that the latter can be detected readily and in large quantity in the urine of all patients to whom salophen had been administered by means of the iron chloride reaction, induced me to employ the new remedy in three cases of cystitis (*i. e.*, cystopyelitis) partly internally and partly in solution for irrigating the bladder. For the latter purpose I prepared a solution of 1.0 gm. (15 grains) salophen to 10.0 gm. (2½ drams) of alcohol, which was diluted with about 500 c.cm. (say 16 ozs.) of water; I injected this after the bladder had been washed out with water. Finally I employed salophen as a dusting powder, in a few cases of profusely secreting wounds or ulcers.

The first experiments, as already mentioned, comprised cases of acute and chronic articular rheumatism, the histories of which I will now proceed to give in brief.

Case I.—Sch. A., a vigorous and well-nourished servant girl, aged eighteen, had suffered since March 16 from pains in both knees, so that she was scarcely able to walk or stand.

On admission, March 18, she had a temperature of 57.8° C. (100.0° F.); both knees were swollen, the capsules of the joints puffy, balottement of the patilla on left side; active and passive movements of the knee joints or movements of the patilla extremely painful. Treatment: hot mush poultices, salophen 4.0 gm. (60 grains).

March 19. Temperature normal, pain less severe.

March 21. Pains only present in left knee, swelling and balottement have subsided.

March 22. Complete disappearance of pains. Salophen 3.0 gm. (45 grains) continued until March 29, cure; duration of treatment five days.

Case II.—Z. M., a weak and ill-nourished servant maid aged twenty-seven, was attacked March 25, by fever and violent pains in the joints.

When admitted, March 26, there were present aside from insufficiency of the mitral valve, tenderness and slight swelling of right knee, left elbow joint and left shoulder joint, pain and marked swelling with effusion into the right elbow joint, which was markedly distended and gave distinct fluctuation, the skin over it being red and hot. Temperature 37.7°–38° C.

[1] From the Fourth Medical Division of the Royal Imperial General Hospital of Vienna. Translated from the *Wiener Medizische Wochenschrift*, Nos. 25, 26, 27, 28, 1892.

(100°–100.4° F.). Poultices, salophen 6.0 gm. (90 grains).

March 30. Fever gone, pains reduced.

April 6. Pain and effusion only present in right elbow joint. Salophen 7.0 gm. (105 grains) administered, which was well borne, considerable free salicylic acid being detected in the urine.

April 15. Under the use of salophen 7.0 gm. (105 grains) and hot arm baths the exudation in right elbow joint has been partially absorbed. Pains have completely disappeared.

April 20. Salophen discontinued. The still existing exudation and anchylosis treated by absorbefacients and massage.

May 7. Patient discharged improved; movements in right elbow joint impaired.

CASE III.—S. V., servant maid, moderately well nourished and strong, aged twenty-two, was attacked April 20, by fever and pains in both knees.

On admission, April 25, she was found markedly anæmic; temperature 37.4° C. (99.3° F.); both knee joints, especially the right, immensely swollen, the skin over them red and hot and motion extremely painful; tenderness in the ankle and elbow joints which were not swollen. Salophen 6.0 gm. (90 grains).

April 26. Temperature 38.2°–38.6° C. (100.7°–101.4° F.); pain and swelling of the knees and ankles increasing.

During the period from April 29 to May 1, salophen discontinued on account of acute gastric catarrh; the fever has disappeared; the pains and swelling persist.

May 2. Salophen 6.0 gm. (90 grains), condition unchanged. On May 5, pains in ankle again increase; salophen 7.0 gm. (105 grains).

May 7. Pain in both knees gone; in left ankle joint slight tenderness on passive motion.

May 9. Discharged cured. Duration of treatment fourteen days.

CASE IV.—S. E., a vigorous young man, aged twenty, was seized April 27, with pains in both hip and ankle joints.

On admission, April 30, both wrist and knee joints were swollen, reddened, fluctuating (balottement) extremely painful on motion; the finger and ankle joints and joint of the great toe very sensitive although not swollen. Commencing endocarditis. Temperature 38.8°–39° C. (101.7°–102.2° F.). Salophen 6.0 gm. (90 grains).

May 1. Temperature 38°–39° C. (100.4° –102.2° F.); urine free from albumen, but containing abundant free salicylic acid.

May 2. Patient has no fever, pains less severe.

May 3. No fever; all joints free from pain even on forced, active and passive motion; swelling reduced. At apex of heart a slight systolic murmur still audible.

May 7. Patient goes about without difficulty and is discharged cured. Duration of treatment eight days.

CASE V.—P. J., sturdy laborer, complains since April 8 of pains in almost all the large joints.

On admission, April 27, both knees, hip and shoulder joints and the right wrist joint were reddened and swollen, all movements painful. Temperature 38.2° C. (100.8° F.). Salophen 6.0 gm. (90 grains).

April 29 to May 1. Increase of temperature in the afternoon to 37.8° C. (100.0° F.) Pains in knees slighter; other joints unchanged.

May 1. Apyrexia.

May 3. Pains in shoulders slighter; swelling of knee has disappeared. Systolic murmur at apex of heart. Urine normal, containing an abundance of free salicylic acid.

May 6. Patient completely free from pain, and is discharged cured. Duration of treatment nine days. Although after administration for two days of 4.0 gm. (60 grains) of salicylate soda per die the patient complained of profuse sweating and debility, he experienced no disturbances of any kind from administration of 7.0 gm. (105 grains) of salophen for six days.

CASE VI.—K. St., a pale moderately strong girl, aged eighteen, had suffered five weeks before from an acute arthritis, and complained since four days of violent pains in both ankle joints.

April 28. Over the malleoli of both ankle joints redness and swelling, the joints very tender on movements; insufficiency of the mitral valve. Temperature 37° C. (98.6° F.). Salophen 6.0 gm. (90 grains).

May 1. Continued apyrexia; acute phenomena have disappeared; slight tenderness in both ankle joints on passive motion.

May 3. Patient goes about without difficulty, and is discharged cured May 9. Duration of treatment eleven days.

Case VII.—Sch. H., moderately strong workman, aged twenty four, had suffered since May 3 from articular rheumatism, complicated with pericarditis. This had already disappeared, when, on May 9, suffered a recurrence, with swelling and tenderness of the right ankle joint, so that the patient experienced violent pains even when resting. Salophen 5.0 gm. (75 grains).

May 10. Temperature 36.8°–37.6° C. (98 2°–99.7° F.). Salophen 6.0 gm. (90 grains).

May 11. The affected joint free from pain, even on forced movements.

May 12. Discharged cured. Duration of cure four days.

Case VIII.—K. C., moderately strong, well-nourished servant maid, aged twenty-six, who had always enjoyed good health, was attacked on May 2 with pains in both knees. During the following days the other joints of the upper and lower extremities were gradually attacked, excepting the joints of the fingers and toes, so that patient was compelled to give up work. At times febrile attacks of short duration occurred.

On admission, May 10, all the above named joints are sensitive to pressure, and extremely painful when active and passive motions are made. No swelling present at any place. Temperature 37.0° C. (98.6° F.). Salophen 5.0 gm. (75 grains).

May 11. Fever absent; pains in joints less severe. Salophen 6.0 gm. (90 grains).

May 13. Slight tenderness in the knee and ankle joints; the other joints unaffected.

May 15. Slight tenderness in ankle joints. Patient walks about without any trouble. Discharged cured. Duration of treatment six days.

Case IX.—B. A., a strong well-nourished coachman, aged thirty-two, of good previous health, was attacked March 15 by violent pains and swelling of both knee and ankle joints. During the following days all the other joints of the lower, then the upper extremity, finally those of the spine, became painful and swollen, so that patient was unable to execute the slightest movement.

On admission, March 20, the robust man presented a lamentable picture. He lay stiff in bed, with anxious countenance, and cried out loudly when one of the swollen joints was lightly touched. All the joints of the upper and lower extremity were swollen, the skin over them hot and red; all active or passive motion attended with violent pain. The area of cardiac dullness somewhat enlarged, the systolic sound dull over all the ostia. The second pulmonary sound accentuated. Temperature 38°–39.5° C. (100.4° –103.1° F.). Salophen 4.0 gm. (60 grains).

March 21. *Status io.* Temperature 38.1°–38.5° C. (100.5°–101.3° F.). Salophen 5.0 gm. (75 grains).

March 22. Pains in the lower extremities less severe. Temperature 37.6°–38.4° C. (99.7°–101.1° F.). Cardiac sound clear. Salophen 6.0 gm. (90 grains).

March 23. Patient since three days completely free from fever and pain. Salophen discontinued. Duration of treatment six days.

On April 4 the patient again complains of pains in the spine, in the shoulders and left knee. Temperature 39.4° C. (103.0° F.). Salophen 3.0 gm. (45 grains).

April 6. Pains relieved. Salophen 4.0 gm. (60 grains).

April 7. Pains in joints entirely absent. Occasional tinnitus aurium lasting for a short time. Salophen discontinued. Shortly after recovery from the rheumatism, patient acquired a pleurisy on the right side. Salophen, which was employed as an antipyretic, failed to exert any effect.

Case X.—N. K., aged eighteen, good previous health, was attacked May 7 with violent pains in the sacral region, which was followed by swelling of both knee and ankle joint.

On admission, May 11, the patient, a vigorous, moderately well-nourished man, had a temperature of 38.6°–39.2° C. (101.5°–102.5° F.); he was unable to move about, even slightly, in bed on account of violent pains in the back and legs, and cries loudly when the limbs are touched. Knee and ankle joints immensely swollen, red and hot. On passive motion patient experiences pain in shoulders and cervical vertebræ. Increased area of cardiac dullness, systolic sounds muffled accompanied with a souffle. Second sound of the heart accentuated over the aorta and pulmonary artery (pericarditis?). Salophen 6.0 gm. (90 grains).

May 13. Temperature 37.3°–37.8° C. (99.1°–100.0° F.). In the affected joints pains only present on forced passive movements. Swelling of the knee and ankle

joints unchanged. Cardiac murmur has disappeared. Area of dullness normal. Salophen 6.0 gm. (90 grains).

May 14. Patient free from pain and fever. Exudation in left knee joint unchanged. Salophen 6.0 gm. (90 grains).

May 16. Patient goes about without difficulty. Exudation in left knee joint diminished. Salophen 4.0 gm. (60 grains).

May 18. Salophen discontinued. Massage of left knee joint. Duration of treatment, eight days.

Case XI. J. J., aged fifteen, a weak anæmic servant girl, gave a history of having worked repeatedly at night fourteen days before when insufficiently clad. Several days later she experienced pains in the knees and calves of the legs, which, on April 27, became so violent that she was compelled to seek the bed.

On admission, May 1, a tuberculous infiltration of the upper lobe of the right lung was found. On movements of the knee joints or pressure upon the calves, pain was experienced; even slight movements of the legs can only be carried out with difficulty, being attended with severe pain. Temperature, 38.6° to 39°. C (101.4° to 102.2°.F). Salophen, 6.0 gm. (90 grains.

May 6. Pains in knees and calves completely gone. Salophen, 6.0 gm. (90 grains). During these five days patient had continued fever on account of extension of the pulmonary process; the fever was about 38° C (100.4° F.), and showed exacerbations in the evening. The quantity of 6.0 gm. (90 grains) of salophen administered daily exerted no effect upon the fever.

May 6. Salophen discontinued.

To these thoroughly described cases of acute articular rheumatism, I will add in brief six cases of chronic rheumatism treated with salophen:

Case I.—E. K., aged twenty-six, a vigorous, well-nourished servant girl, had suffered from frequent attacks of articular rheumatism since 1886, and in the course of these had acquired a mitral insufficiency. On May 28, she was attacked by pains in the joints of the fingers of the left hand, and in the left knee. When admitted, April 11, these joints were still painful; the knee was swollen, and a grating sensation felt in it. Temperature normal. Up to April 27 patient received daily 6.0 gm. (90 grains) of salophen, which was well borne. On April 17 the pain and swelling of the affected joints had disappeared, and patient was discharged cured April 19. Duration of treatment eight days.

Case II.—L. A., a weak man, suffering from chronic bronchitis, had four years previously passed through a severe attack of articular rheumatism, and since then had suffered constantly from rheumatic pains in the right knee. April 15 the left wrist and right knee joint began to swell, and fluctuation was noted; movements provoked violent pains. Temperature normal. Salophen 4.0 gm. (60 grains). April 15-17, salophen 6.0 gm. (90 grains). Pains in the still swollen joints disappeared so that movements, as far as they were possible on account of the profuse articular exudation, could be executed without difficulty. Absorption of the exudation could not be brought about, although 6.0 m. (90 grains) of salophen were administered for one week.

Case III.—A. M. had suffered for several years from frequent attacks of shifting pains in the shoulder, hip, and knee joints, which had been treated by salicylate of soda, local application of ichthyol and massage with only temporary success. Patient received during eight days 6.0 gm. (90 grains) of salophen. The pain in the joints was relieved, the swelling, however, remained the same. Patient could walk about with difficulty with the aid of a cane, while previously he had been confined to bed. After the first administration of salophen patient complained of a feeling of weight and constriction of the head and occasional vertigo. More marked disturbances, however, did not appear, and the existing disorders disappeared spontaneously after three days' administration of the remedy.

Case IV.—A. M., aged twenty-four, an agent, had suffered for many years from painful swelling of both knee and ankle joints. The patient was given 3.0, 4.0, 6.0 gm. (45, 60, 90 grains) of salophen per die for three days, after which the pains disappeared during rest in bed, although they immediately reappeared when he attempted to walk. Although the remedy was continued for eight days, further improvement was not remarked.

Case V.—R. J., aged nineteen, an apprentice, had been under treatment since February, 1891, for severe articular rheumatism combined with acute endocarditis. Notwithstanding continued administra-

tion of salicylate of soda until the middle of March, pain and swelling of the right shoulder joint persisted. Temperature 36.7° C. (98°. F.) From March 14 to 19, 4.0 gm. (60 grains) of salophen was administered daily, but without any noteworthy result. The pains in the shoulders became more violent, and spread to the arms. Salophen was then discontinued and massage resorted to, under which the condition improved.

CASE VI.—S. K., aged forty-six, a servant, had suffered from an attack of severe articular rheumatism in 1889. Since then was troubled with violent pains, especially in the knees, at every change of the weather, which, during the last few weeks, were associated with persistent pains.

May 10. Salophen 6.0 gm. (90 grains). Temperature, normal; the above-named joints tender but not swollen.

May 12. Pains unchanged. During the afternoon profuse sweating for two hours.

May 14. No change. In the afternoon every day a disagreeable attack of sweating, after which patient felt greatly debilitated.

May 16. Salophen proves inefficient and is discontinued.

If we now study the effects of salophen in the above-described cases of acute articular rheumatism, we find that the remedy did not disappoint us in any of the cases. In almost every instance the pains had subsided in three or four days, even in the joints most severely affected, and six to eight days later the acute swelling had disappeared. Effusions into the joints of slight extent were readily and completely absorbed, while large exudations remained either unaffected by the salophen or absorption was brought about only with the aid of absorbifacients and massage.

CASE IX was especially instructive. Thanks to the prompt action of salophen, the first attack was terminated in six days. Eight days later, however, an equally severe recurrence took place, which subsided in four days under much smaller doses of salophen, but was followed by a pleurisy. Although the fever accompanying the rheumatism had disappeared after three days' administration of salophen, the fever of pleurisy remained entirely unaffected.

This teaches us, first, that Salophen is as incapable as the other salicylic preparations of preventing recurrences after recovery from acute rheumatism, and, second, that salophen promptly acts upon the fever of rheumatism, but has no influence upon febrile conditions of different origin, as is shown by Case XI and other cases referred to later.

It was further observed in Cases IV and V that, notwithstanding the administration of sufficient quantities of salophen, an acute endocarditis developed, while Case X, at the time of admission, prevented extensive and well-marked cardiac dullness and muffled heart sounds, accompanied with murmurs, so as to lead us to suspect pericarditis, which symptoms had disappeared completely in the course of three days. Whether this was attributable to accident or to the effect of salophen, could not of course be decided.

A less favorable result was obtained from the salophen treatment in six cases of chronic rheumatism, of which only the first could be regarded as cured. In the second and third case the improvement consisted only in removal of the pains in the joints, while the exudations and consequent ankylosis of the affected joints was entirely uninfluenced, notwithstanding that considerable doses of the remedy were exhibited. In Cases IV, V and VI the effect was absolutely nil.

The second series of experiments undertaken for the purpose of testing the antipyretic effect of salophen, gave a doubtful result. An action upon the temperature was noted only in a case of pyrexial phthisis, the course of the fever being described further on. Every one who knows how variable are the febrile conditions in pulmonary tuberculosis, and how much the fever curves depend upon the progress or arrest of the pulmonary trouble, will appreciate that little stress is to be placed upon such remissions which are apparently produced by the antipyretic.

In the case of a weak and anæmic patient, who suffered from advanced tuberculosis of the right lung, the following two days occurred during the course of the fever:

Date.	Salophen, Hour of Administration.	Hour of Taking Temperature.	Temperature.
March 16.	4.0 gm. [60 grains.]	7 o'clock.	38.3°C. [101.0°F.]
	8 o'clock.	10 "	37.5° " [99.5° "
	11 "	12 "	37.2° " [99.0° "
	1 "	2 "	37.6° " [99.6° "
	3 "	4 "	37.8° " [100.0° "
		6 "	39.3° " [102.7° "

Date.	Salophen, Hour of Administration.	Hour of Taking Temperature.	Temperature.
March 17.	4.0 gm. [60 grains.]	7 o'clock.	38.5°C. [101.3°F.]
	8 o'clock.	10 "	37.9° " [100.2° "
	9 "	12 "	38.0° " [100.4° "
	10 "	2 "	37.9° " [100.2° "
	11 "	4 "	38.0° " [100.4° "
		6 "	38.5° " [101.3° "

From the history of these two days of the disease the conclusion may be readily drawn, that on the first day the apyrexia of seven hours duration was certainly not attributable to salophen, since when administered on the following day in equal doses and at shorter intervals, it was unable to reduce the temperature to normal, even for an hour.

Date.	Salophen, Hour of Administration.	Hour of Taking Temperature.	Temperature.
April 3.	3.0 gm. [45 grains.]	10 o'clock.	39.2°C. [102.5°F.]
	10 o'clock.	12 "	39.4° " [103.0° "
	3 "	2 "	39.8° " [103.6° "
	6 "	4 "	39.5° " [103.1° "
		7 "	38.2° " [100.7° "

Date.	Salophen, Hour of Administration.	Hour of Taking Temperature.	Temperature.
April 4.	5.0 gm. [75 grains.]	8 o'clock.	38.5°C. [101.3°F.]
	8 o'clock.	10 "	38.8° " [101.8° "
	10 "	12 "	37.7° " [99.8° "
	2 "	3 "	37.1° " [98.8° "
	4 "	5 "	38.0° " [100.4° "
	6 "	7 "	38.4° " [101.1° "

In a case of chronic pleuro-pneumonia complicated with erysipelas, the same doubtful result was observed.

Date.	Salophen, Hour of Administration.	Hour of Taking Temperature.	Temperature.
March 18.	5.0 gm. [75 grains.]	8 o'clock.	38 3°C [101.0°F.]
	8 o'clock.	10 "	37.5° " [99.5° "
	9 "	12 "	36.5° " [97.7° "
	10 "	2 "	36.0° " [96.8° "
	11 "	4 "	36.5° " [97.7° "
	12 "	6 "	36.3° " [97.4° "
		8 "	36.7° " [98.0° "

Date.	Salophen, Hour of Administration.	Hour of Taking Temperature.	Temperature.
March 19.	5.0 gm. [75 grains.]	8 o'clock.	38.3°C. [101.0°F.]
	8 o'clock.	10 "	38.3° " [101.0° "
	9 "	12 "	38.2° " [100.8° "
	10 "	2 "	38.5° " [101 3° "
	11 "	4 "	37.7° " [99.9° "
	12 "	6 "	37.7° " [99.9° "
		8 "	37.5° " [99.5° "

The same occurred in a case of erysipelas, and, as already described, in a case of pleuritis sicca. Whenever a remission took place which could not be attributed to a change in the disease, as, for example, in the case of pleuro-pneumonia complicated with erysipelas, it lasted at the most twenty-four hours, and gave way to a febrile exacerbation on the following day, in spite of continued administration of salophen. If the reduction of temperature occurred during the day it lasted no more than three or four hours, even when the remedy was given at short intervals.

Salophen was also employed in three cases of cystitis, partly internally and partly in fluids for irrigating the bladder.

The first case was a servant maid, aged twenty-two, who had suffered for fourteen days from blennorrhœa of the vagina and urethra. The urine was alkaline and turbid, and deposited a sediment which, besides phosphates, contained a large number of pus corpuscles, but no renal casts. In short, the patient presented the typical symptoms of acute cystitis. Salophen 3.0 gm. (45 grains) was administed daily, and the bladder irrigated in the manner already described. As early as two days the pains in urination had become less severe, and after three days more the urine became clearer, and nine days after admission the urine no longer contained pus, so that three days later the patient could be discharged cured.

A second patient had suffered six months from vaginitis and urethritis. The urine deposited a thick sediment of pus, renal and vesical epithelium, had a strong ammoniacal odor and alkaline reaction. Salophen was employed in the same manner as in the first case, but as not the slightest change occurred in the urine other measures were resorted to.

In the case of a paralyetic patient, suffering from paralysis of the bladder and a moderate degree of cystitis, resulting from prolonged use of the catheter, salophen was administered internally for eight days in doses of 6.0 gm. (90 grains) per die.

The pus in the urine, however, did not diminish, although addition of iron chloride in the urine assumed a deep violet color, indicating abundant presence of salicylic acid.

In the following cases salophen was used as a dusting powder, without application of other antiseptics: Suppurating mucous crypt on foot, abscess of the forearm, incised panaritium, and ulcerating fungus pedis. In the first case an abundant formation of granulations occurred, with only slight secretion of pus, and cicatrization was complete in eight days. In all the other cases vigorous granulations developed, but in combination with profuse suppuration, so that cicatrization took place very slowly, and iodoform had finally to be resorted to.

It is noteworthy that under the salophen treatment after-effects were observed in only three cases, which, however, never became so marked as to necessitate discontinuance of the remedy. In a case of advanced phthisis in a greatly debilitated patient, and in a case of chronic rheumatism, there appeared regularly, after administration of the salophen in the afternoon, a profuse sweating, combined with exhaustion, which, however, lasted scarcely two hours, and was followed by no other subjective disturbances. Another patient suffering from chronic rheumatism complained after the first dose of salophen of a feeling of heaviness in the head, dizziness and tinnitus, which, however, disappeared spontaneously, notwithstanding uninterrupted use of the remedy. As already remarked at the beginning, these symptoms are due to too rapid decomposition or faulty excretion of the salicylic acid, for the second constituent of salophen, acetyl-paramidophenol, has been found an entirely innocuous in experiments on animals.

It should also be mentioned that salophen in large doses was well borne for a long period by a patient, who, after two days administration of salicylate of sodium (4.0 gm.; 60 grains) per die, experienced exhaustion and profuse sweats (Case V).

If, in view of our observations, we would give our decision as to the utility of this new salicylic preparation, the following conclusions may be formulated:

Salophen has shown itself a pompt and rapidly acting remedy against acute articular rheumatism. It is to be placed in the same category with sodium salicylate and salol as regards efficiency, but it is not hygroscopic, and may, therefore, be preserved in any form; second, it is tasteless in contrast to the disagreeable taste of sodium salicylate and salol; third, and this is its chief advantage, it may be administered, even in large doses for a long time, without the disagreeable after-effects of other salicylic acid preparations, such as loss of appetite, nausea, vomiting, vertigo, tennitus aurium and even collapse, for the reason that salophen is not decomposed until it reaches the intestine, and, therefore, cannot have an action upon the stomach. As a matter of fact, we never observed among the 30 cases observed by us disturbances of the functions of the stomach, and only in three instances transient cerebral symptoms.

The action of the remedy upon chronic articular rheumatism was not constant in the 6 cases observed; while in the first case it had a good effect, it proved utterly unreliable in three other cases. At any rate, it would be worth while to test salophen in chronic rheumatism, just as it is customary to make trials of the other salicylic acid preparations in these cases. Salophen will at least rapidly relieve the pain in the joints in most cases, while no great hope need be entertained as regards absorption of large exudations.

As an antipyretic it has proved inefficient in any dose or manner of administration.

The attempts to utilize salophen practically as an antiseptic, in consideration of its large quantity of salicylic acid, cannot be regarded as decisive, since I am unacquainted with the action of salophen upon pathogenic and putrifactive bacteria. It would be a grateful task to institute experiments in this direction upon more suitable material than at my disposal, and with the aid of the recent auxiliaries of bacteriology.

In conclusion, I would express my thanks to Dr. Scholz for referring to me suitable cases.

THE sanitary condition of wood pavements as a cause of cholera, through the dust arising from them, is now in question. It may afford a possible nidus for the germ. Still, it is consoling to know that most of the street refuse finds its way into the sewers.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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CITY DRAINAGE AND WATER SUPPLY.

CHICAGO has commenced the construction of works to divert her sewage from the lake by a new route. A branch of the Chicago river is to be connected with the Illinois and Michigan canal, and the current turned into the Des Plaines river at Joliet, forty miles from Chicago. All these channels are to be enlarged to create a water way two hundred feet wide and eighteen feet deep, with a minimum flow of three miles an hour. This will dilute the sewage to a harmless state, and on this condition all opposition along the route has been withdrawn. The canal may be utilized for commercial purposes, and be considerably larger than the dimensions given. This channel is calculated to be equal to the needs of a city of 3,000,000 inhabitants. It appears to be taken for granted that Lake Michigan will supply all the water required. The health, beauty and commercial interests of Chicago will alike be benefited by this plan, and we are glad to know that the work has been actually begun; and will be still more pleased when we can record its successful completion.

Perhaps it will stir up Philadelphia on the subject of her water supply. The water of the Schuylkill is doubtless better than that of the Elbe, or than that supplied to most large cities; but it is not good enough if better can be secured. The Schuylkill drains a rich country, thickly peopled, its banks lined with rapidly growing towns. It is certain that the quality of the water will become worse, with the certain increase in the sources of contamination. It is then only a question of time, and most people think the time has come, when we will be compelled to abandon this river and obtain our water from the only other source available, the Delaware river above Trenton. Here we have an abundant supply, from a river whose drainage basin is sparsely populated, and has no resources that will be likely to attract a larger population at any future period. Such sources of contamination as now exist could be removed by a small expenditure, and the acquisition of such property as would be necessary to maintain the purity of the water, would not be costly in a region where real estate has but little value.

In addition to the benefits conferred upon the public, the Delaware aqueduct would afford relief to a number of Philadelphia manufacturers. Strung along the Schuylkill from Riverside to Flat Rock Dam is an almost unbroken line of factories; paper mills, dye houses, plush, woolen and cotton mills. These factories give employment to thousands of our citizens, and their operations form no inconsiderable proportion of the city's industries. Many of these were located on the river bank before the present laws relative to water pollution went into effect. The present regulations, necessary as they undoubtedly are to the city at large, have put these firms to very heavy expense, in providing for the discharge of their waste products by other channels than the river. In many cases pumps have had to be provided and employés paid to operate them. This puts a burden upon these enterprises

that must handicap them to some extent in the race with their competitors who have no such drawbacks.

Over and over again, times without number, it has been proved that good hygiene is one of the soundest investments that can be made. It pays the citizen to put his premises in good hygienic condition. It pays the city that provides the best drainage and the best water, as well as the best schools and the finest public buildings; for all these things attract population and trade. We trust that the question of a better supply of water will soon be brought prominently forward, and that this may be done in a way that will not warrant the cry of jobbery in connection wlth the proposed enterprise.

Annotation.

SMOKE FOR TUBERCULAR PHTHISIS.

DR. W. C. ALBERTSON (*Med. Record*) has the honor of introducing a new method in the treatment of pulmonary tuberculosis. He speaks of the antiseptic and penetrating qualities of smoke; claims that it does no harm to the most delicate mucous membrane, and recommends it as an efficient agent in bacillar phthisis. He takes beechwood sawdust, mixes it with some harmless, quick-burning substance (tobacco?), and directs his patients to smoke it in an ordinary clay pipe. The treatment is continued from two to six months. Improvement is manifest after two or three weeks. At first the smoking causes cough, with increase of power to eject sputa. Both cough and expectoration then decrease until they cease. The weight increases. The temperature soon falls, but the pulse remains rapid to the last. At first the smoking is continued for but a few minutes, but the time is increased to forty minutes, and the smoking repeated two or three times a day. Eucalyptol and other drugs could be used on the sawdust. The idea might further be utilized in the treatment of diphtheria.

Letters to the Editor.

PLETHORA AND PRURITUS.

THERE is a storekeeper here who has suffered from itching, often most trying, especially on going to bed, for some years. It is situated about two inches below umbilicus, and often encroaches on scrotum. The marks are not very distinct, frequently, as is usual, showing nail scratches. After employing the physicians here, three or four months ago, he came to me. I gave him a slight temporary relief, not appreciable. The man is strictly moral; married; aged thirty-six; of phlethoric habit and build. I first advised removing the hair, and used ordinary local applications, with an alterative, but he says "nix gut."

W. J. NOLAN, M.D.

EMMETSBURG, IOWA.

[Give him colchicine and sodium salicylate internally, with tincture of benzoine locally. Put him on low diet, little meat, no coffee, plenty of fruit and cold water.

W. F. W.]

RHUMATIC FEVER.

I HAVE tried various remedies and plans of treatment, among them salol, salicine, the coal tar derivatives, salicylic acid, and the salicylate of soda. The latter remedy has proven more satisfactory in my hands than any of the other. A formula which gives very good satisfaction is as follows:

℞.—Sodii salicylatis..... gr. viij.
Potassii acetatis..... gr. v.
Vini colchici..... gtt. iij.
M.—Sig. Take every two hours till improvement begins, then not so often.

I sometimes combined salicylate of soda and antikamnia with very satisfactory results. Locally I like the following, both in the acute and subacute form:

℞.—Sodii salicylatis..... ʒj.
Tinct. opii..... ʒij.
Aquæ..... ʒij.
M.—Sig. Apply locally with palm of hand, rubbing in thoroughly.

J. BRYANT, M.D.

WEST POINT, ILL.

RHEUMATOID ARTHRITIS.

TO write an account of a favorable result in the treatment of a case of the above trouble of years standing, may, in the minds of some practioners, be accepted with a "grain of salt" as to diagnosis or permanency of effects.

A gentleman, farmer, aged fifty-three years, of full habit, applied to me in July of last year for relief from a painful condition in both feet. More especially in the metatarso-phalangeal joints. Parts were decidedly swollen, integument shiny, reddened and very tender; at intervals of a few days those conditions would, to a degree, subside but soon return again; gradually became more severe in character until he could not wear shoes he formerly wore, and walking became intensely suffering, of which he could do but little.

After the failure of several other physicians who were unanimous as regards diagnosis of rheumatoid arthritis, I began what I feared an inglorious task, with the promise to aid him if I could.

He also experienced dull, almost constant pain, in the lumbar regions, which he surmised "Bright's." I began with alkaline remedies to neutralize the blood, which showed marked acid reaction in the urine, followed with tablet triturates of arsenious acid, gr. $\frac{1}{60}$ gradually increasing to gr. $\frac{1}{10}$ of same, with an occasional application of galvanism, and stimulation of the liver mildly, at frequent intervals with eunoymin pill. For several weeks also, I gave him Wampole's preparation of cod-liver oil, as an excellent reconstructive tonic.

Externally I had the parts painted daily with tr. iodine.

In diet I requested him to avoid the use of beef, mutton, pork, and sugar, and drink no alcoholics. If we accept the theory that the presence of uric acid in excess from suboxidation of nitrogenous viands and mal-assimulation is due to the train of symptoms constituting rheumatism, it needs little argument to establish the axiom that to abolish as far as possible from a highly nitrogenous diet is desirable, as the first step in the right direction to minimize a tendency to failure to the point of formation of urea in the blood.

After about three months' treatment according to the above plan, the gentleman had gradually improved to the degree of almost entire comfort, walking with ease, wearing his former shoes, and following his former vocation, and passed from my professional notice. A short time ago I wrote Mr. S., asking for a general report of his condition as regards to permanence of changes made, when, on a following Sabbath, he reported in person, meeting me with a hearty greeting that expressed all I learned afterward, that he had retained all he had gotten more than six months' previously. Feet normal to the sight, the only manifestation of the old trouble was slight tenderness felt by hard pressure on two of the small joints. After making a practical failure of every case of this kind I ever treated before, I feel gratified in being able to report so favorably in this, and believe my success was almost entirely in stopping or lessening the formation of excessive uric acid in the system, and beginning with small and increasing doses of arsenic, continued for months, with the possible help of galvanism.

T. COATES.

RUSSELVILLE, PA.

MORPHINE HABITUÉS.

SIR:—Dr. Lett's letter in your journal to-day prompted me to say that among the hundreds of opium habitués who have been under my care, or concerning whom I have been consulted, the most remarkable was a physician's wife "thirty-four years old; always sickly; four years ago had severe illness, during which took morphine subcutan.; was ill three months; convalescing, could not quit the drug; continued in increasing quantity till, at end of two years, took 40 grs. per day, hypoderm., and one or two 5 gr. doses by mouth. After a time changed to entire taking by mouth, reaching 60 to 75 grains daily, and *all at one dose.* One year ago resumed syringe, reaching 40 to 50 grs. per diem, and had hard work to get along on that."

The special feature of this case is the large amount taken in one dose. Such patients are rare. So, too, are those with whom one taking per day will suffice. Twice, or oftener, is the rule. Exceptions to this are of interest, and—forensically—of importance. *Vide* paper by the writer, "Two Peculiar Cases of Morphine; a Medico-legal Study."

The amount taken by Dr. Page's patient—"two ⅛ ounce vials per week"—

has been exceeded by several patients under my care. During the last two years three women have been dismissed cured, each of whom took 30 grs. daily for several years. Two were sisters—ten years taker—and the other a seventeen years user. See paper, "The Curability of Narcotic Inebriety," reprint at command.

Dr. Page did not state the form of his patient's addiction—by skin or stomach. An important point this, for the effect by former is double that by mouth. Bartholow says triple, but a large experience has proved this over-great. In changing from syringe to stomach we never have given more than twice as much. This, too, only when taking less than 10 grs. per day. If the daily taking exceeds ten, the same amount, by mouth, will suffice.

That Dr. Page's patient should "be up and about," is not all "startling;" nor that she is "a very neat woman." Neither condition is uncommon. My experience along the latter line has been more pleasant than that of Dr. Lett. Neatness in female patients has been the rule. The three women cited were not untidy, and another under care last year, who had taken laudanum twenty-two years, reaching nearly a pint per day, was above reproach in this regard.

MATTISON,
Med. Direc. Brooklyn Home for Habitués.
BROOKLYN AVENUE, BROOKLYN.

TREATMENT OF ACUTE RHEUMATISM.

AS I have found in acute rheumatism that the urine was loaded with uric acid and acid urates, and the secretion of the skin generally being acid, I have always adopted the alkaline plan of treatment, or the plan in which alkalies play an important part.

When I find a patient having had chilly sensations, or a severe chill, with a temperature of 100° to 102° F.; the joints swollen and tender to the touch, possibly discolored from the inflammation; motion impaired by the swelling and pain; the tongue usually coated, and the bowels constipated; the secretion of urine diminished, and markedly acid, I generally prescribe:

℞.—Hydrargyri chloridi mitis..... gr. ij.
Sig. Every two hours until free evacuation of bowels occurs.

℞.—Sodii salicylatis..... gr. x.
Sig. Take every three hours until the pain is better.

The pain in a few hours, or at most in twelve to twenty-four hours, begins to subside; after which I often administer the following:

℞.—Potassii bicarbonatis..... ʒiij.
Aquæ destillat..... Oj.
Elexiris ..... f ʒij.
M.—Sig. One tablespoonful every two hours.

After a few days I add quinine in doses of 2 grains every three hours, which plays an important part. The alkaline treatment I continue until the urine is secreted in nearly or quite normal quantity, and is only slightly acid in reaction, I then give a general tonic.

The joints I place in cotton batting until the swelling subsides, and the temperature of the joints becomes nearly or quite normal. The cotton prevents any change of temperature from external influences. I also enjoin absolute rest in bed from the first. The diet, until the acute symptoms have passed, consists of milk; after the acute symptoms have subsided, more solid food is added. Under this plan of treatment I have treated a great many cases, and have never had any organic lesion of the heart to follow.

As to acute rheumatism being a self-limited disease, I have fully made up my mind that it is not; as I have seen some very bad cases controlled in a few hours' time, and believe that to cut the attack very short you want to push your alkalies early.

F. W. FRANKHAUSER, M.D.
READING, PA.

RHEUMATISM.

LINIMENT for inflammatory rheumatism:

℞.—Aconiti tinct. U. S. P..... ʒiv.
Ext. hamamelis destillat..... ʒiij
Alcohol..... ʒij.
M.—Sig. Apply and cover with flannel.

℞.—Ferri phos..... gr. v.
Lithii brom..... ʒvj.
Aquæ dest..... ʒiv.
M.—Sig. Teaspoonful two to three hours in water.

℞.—Acidi salicylici,
Sodii bicarbonat.....āā ʒij.
M.—Chart No. xii.
Sig. One every two to three hours.

For chronic rheumatism:

℞.—Olei sassafras,
Olei spike,
Aq. ammonia.....āā ʒj.
M.—Sig. Apply and cover with flannel.

In some cases add cotton seed oil in similar quantity to the above.

For lumbago:

℞.—Potassii iodidi..... ℥ij.
Tinct. macrotrys (herb. virid)..... ℥ij.
Tinct. rhus tox. (herb. virid)..... gtt. x.
Ag. ol. menth. pip .....q. s. ad ℥iv.

M.—Sig. Teaspoonful every three hours; later, three times a day. Take mixed with water.

Keep the bowels regular with salines. These prescriptions are some of the many found to act well in these complaints. As to the coal tar derivatives, I seldom use them, and then only combined with a stimulant, and then I watch for heart complications. C. M. BRUCKER, M.D.

TELL CITY, IND.

Book Notice.

DARWIN AND AFTER DARWIN. An Exposition of the Darwinian Theory and a Discussion of Post-Darwinian Questions. By GEORGE JOHN ROMANES. I. The Darwinian Theory. Chicago: The Open Court Publishing Company, 1892. Cloth, 8vo., pp. 460. Price, $2.00.

Mr. Romanes is the incumbent of a lectureship founded by Lord Rosebery, in the University of Edinburgh, on "The Philosophy of Natural History." The present volume, and two to follow, contain the substance of the author's lectures given at this institution. In the volume before us, the second of the series, Mr. Romanes endeavors to present a systematic exposition of what he terms "The Darwinism of Darwin." The evolution theory is stated with a perspicuity that would have pleased its illustrious originator, showing that with the Darwinian tenets the author has adopted Darwin's clear, logical, and judicial method of dealing with it. In nearly every page our author has introduced new material that has accumulated since the "Origin of Species" first upheaved a volcano on the plains of thought. The flippant inquirer for "missing links," if he ever took the trouble to read it, would be certainly amazed to find how many of the gaps have been filled. The book is well gotten up, on good paper, and fully illustrated. The price is very small for a work of its merit, size and mechanical execution.

A MANUAL OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By HENRY C. CHAPMAN, M.D., etc. With 36 illustrations, some in colors. Philadelphia: W. B. Saunders, 1892. Cloth, 8vo., pp. 237. Price, $1.25.

This volume presents a digest of the author's lectures on the subjects mentioned at the Jefferson Medical College; especially treating of such topics as his experience as Coroner's Physician proved to be of most practical importance.

GONORRHŒA AND URETHRITIS. By J. FRANK LYDSTON. George S. Davis, Detroit. Paper, 25 cents.

A subject of practical importance, treated by a practical man.

Dr. Lewis picked up in some obscure corner a copy of an old Spanish work, entitled "Anatomia Completa del Hombre," by Martin Martinez, published in Madrid in 1775. It is bound in vellum, and illustrated with 22 cuts. One of them delineates a child whose heart protrudes from an opening in the sternum, the organ lying wholly outside of the thorax, and, if we may trust the artist, outside of the skin. The case is said to have been reported in 1706.

LA REVISTA MEDICO-QUIRURGICA AMERICANA. A monthly journal in Spanish, printed in New York City by J. Shepherd Clark Co., and edited by DRS. S. E. MILLIKEN and P. J. SALICRUP.

The original papers in the opening number are by L. A. Sayre, John A. Wyeth, and John E. Weeks, all of Nueva York City. Of the collaborators twenty are from New York City and fourteen from the provinces.

MEDICAL MATTERS MENTIONED IN JEST. By LELAH. 100 illustrations. Chicago: Era Publishing Company, 1892.

A little paper-bound 12mo. of 60 pages, of medical humor, sometimes at the patient's expense, oftener at the doctor's. Very amusing.

The Medical Digest.

TREATMENT OF CHOLERA.—At the Académie de Médecine M. Peter gave a succinct account of the 118 patients he had treated in the Hôpital Necker. The mortality was 40 per cent. all round, but where the dejections were riziform it was 95 per cent.; in other words, all treatment was powerless. All the cases came from the faubourgs, none from the center

of the city. The majority of the patients who died succumbed before the period of algidity from simple prostration, vomiting and dysentery ceasing several hours before. His treatment consisted in the administration of opium, the application of ice along the spine, and when collapse set in, vigorous frictions, injections of ether and caffeine, and above all mustard baths. Champagne and brandy were also freely given to sustain the strength.

M. Brouardel said that one of the characteristics of the present epidemic was to be found in the class of persons attacked, who were nearly all debilitated by poverty, disease, or drink. Out of ten drunkards nine died, whereas out of the same number of temperate persons only two succumbed.

M. Galliard said that he treated 150 patients by intravenous injections of artificial serum, according to the method of Hayem. The vein chosen was the internal saphenous, immediately above the malleolus. The composition of the liquid was as follows: chloride of sodium, 5 grm.; sulphate of soda, 10 grm.; distilled water, 1,000 grm. The dose of the solution, maintained at 101°, was two liters, or 2,000 grm., and the instrument used was the transfusor of Colin. The *raison d'être* of the operation was to restore to the blood the serum of which it had been deprived by the constant evacuations, and thereby to gain time for other treatment. The operation was especially useful where collapse had set in. Although in many cases the transfusion did not succeed, it never aggravated the position of the patient. Out of 147 patients thus operated *in extremis* 25 recovered. M. Galliard admitted that the latter figure was very low, yet he was convinced that even those few owed absolutely their salvation to the transfusion.

Mixture Against Cholera :—

℞—Hydrochloric acid..... ♏xxx.
Hydrochlorate of cocaine..... gr. ij.
Laudanum..... ♏xxx.
Syrup of peppermint..... ℥j.
Water ..... ℥vj.
A tablespoonful every two hours.

Under the influence of this treatment the vomiting and the diarrhœa cease rapidly.

At the Berlin Medical Society, Guttman gave his experience: It was self-evident that the treatment of cholera must be a stimulating one, internally by alcohol and spirituous wines, and subcutaneously by injections of camphor, ether, etc., external, warm bottles in bed, hot baths, etc. The speaker had also employed saline infusions. This treatment was quite rational, for the disappearance of the pulse was due to thickening of the blood. The subcutaneous injections could be made with very simple instruments, with syringes, for instance, containing 100 to 200 grammes of fluid. For hospital work, however, it was indispensable that some apparatus should be used by which the injection could be carried out more quickly. He showed an apparatus consisting of a bottle holding 3 liters, and a bellows that drove out the air, so that the fluid flowed out under greater or less pressure, as required. The fluid used was ⅔ per cent. boiled solution of common salt, which was kept at a blood heat. As point of puncture, the subclavicular region was selected. The skin was simply raised and the trocar or hollow needle inserted. When no assistance was at hand, the attendant himself could knead the skin, and in this way spread out the fluid into the surrounding tissues. If a large quantity of fluid had to be injected, two points might be made use of for puncture. It was necessary to inject at least a liter of fluid at one time. In one case he made injections six times in twenty hours, and injected 5.7 liters of fluid.

Dr. Guttman was followed by Dr. Pfeiffer with an address on the "Bacteriological Diagnosis of Cholera," with demonstrations. He showed that the microscope, in some cases, revealed at once to the experienced searcher the comma bacillus as the dejections were, at times, simple, pure cultivations of the cholera bacillus. In other cases, however, the diagnosis was not so easy, as the cholera bacilli might be hidden by the numerous other saprophytes that were present. In doubtful cases it was important to make cultivation experiments for the sake of diagnosis, a definite result could always be reached in twenty-four or, at most, thirty-six hours.

The Treatment of Cholera in Hamburg.—On the 30th ult., Hr. Rieder related before the Aerztliches Verein his experiences of the treatment of cholera in the Allgem. Krankenhaus. He said no results worth mention had been obtained by the subcutaneous injection of saline solutions. The intravenous injection of the same

solution gave at least, at first, very good results in about two-thirds of the cases, and, amongst others, some asphyxiated patients were still living. Other patients treated in the same way died very rapidly. One woman, on whom three intravenous injections had been made, was still living. In many cases the pulse became transiently better, in others it remained good after the first infusion. The latter looked as if they would recover. The patient bore two to four liter injection of fluid very well. The excretion of urine increased in nearly all cases after infusion, without the increase having the favorable significance attributed to it by many observers. On the whole, better results were observed in men than in women, as the disease ran a much quicker course altogether in women than in men.

In Austria much attention has been given to the analeptics and antiseptics. These may be comforting agents for the medical epicure, but the more philosophic will be anxious to know what he has to treat, and how those engaged in the heat of the battle have struggled with the fiend. The classic record of Cantani made during the epidemic in Naples, 1884, seems to meet with general favor among those engaged in the Russian hospitals. Cantani divided the cases into those where death ensued from a thickened state of the blood, consequent on the loss of water by the stools, which he considered present in a large number of the sudden collapsed cases. He freely admits the presence of the opposite condition, or cholera fulminant, where no water is lost, and death more rapid. The latter he attributes to the intoxication of the comma bacillus agency, and changes produced in the mucous membrane of the alimentary canal. His treatment resolves itself into:

1. Limit the increase of the bacilli in the gastric canal.

2. Neutralize the toxic products already accumulated in the alimentary tract.

3. Rapidly eliminate the already absorbed toxine from the hæmatic circulation.

4. Relieve the more or less thickened condition of the blood present in all cholera intoxication.

The latter indication is the one more peculiar to Cantani. Hot enteroclysis of tannic acid are good as far as they go in checking the abnormal flow from the mucous membrane, but when taken alone he considers it a danger, and therefore prescribes hypodermic injections of warm water in the algidic condition, which he affirms arises from the thickened blood, and if not early relieved with warm water, or better, warm water and chloride of sodium, fatal results will speedily ensue.

The water must first be sterilized, and not contain more than 7 per 1,000 of common salt.

Since that time Cantani's logic has been accepted as the most practicable solution of the difficulty. Reports from the different Russian schools are not unanimous in this treatment after many trials. It is generally admitted that good results have been seen, but others deny that any benefit has been perceptible.

The prevailing form of treatment seems to be the good old dose of calomel; some in large quantities, others in small doses, but frequently varying from half an hour to an hour's interval; a gramme is frequently given as a dose at the beginning of the attack. Internal antiseptics are also given, but the most common are those that are least rejected, such as the bismuth preparations, salicylate, subnitrate, etc., with salol and creolin. Iodoform has been given, but the vomiting does not favor the result. The hypodermic injections with a 1 per cent. tannic acid clyster has been largely used, with questionable results.

The treatment during the analepsis is also various, but not so conflicting as during the morbid stage. Injections or the internal use of camphor moschus with wine, etc., are the greatest number. To maintain warmth and free circulation of the blood, warm baths, cutaneous friction, warm compresses, "frottering" the skin, etc., have all been largely used. Mustard plaster, rubbing with different strong spirits, etc., are applied for the cramp.

It is worthy of note that opium in any form is very rarely used.

Observations tend to confirm theory that it interferes unfavorably with the speedy elimination of the toxine, and whatever benefit it might be to the checking of the flux its effects have a tendency to cause absorption.

Ice, hot coffee, tea, and fluid diet comprise the general form of practice in Russia.

CHOLERA TREATMENT.—Dr. Gaillard's (of Havre) method is as follows: When

the patient is already in the algid stage his body is vigorously rubbed, repeated hypodermic injections of caffeine and ether are given, and also inhalations of oxygen. If no benefit accrues, then two liters (for an adult) of a saline solution, consisting of sterilized distilled water, 1,000 grammes; chloride of sodium, 5 grammes; sulphate of sodium, 10 grammes, are injected into the internal sapherous vein. Sometimes the transfusion needs to be repeated, but not till the lapse of eleven hours. When the patient can swallow, administer a liter of sweetened water containing 15 grammes of lactic acid. Follow this with champagne, coffee and nutrient enemata.

—*The Lancet.*

Salol in Cholera.—For cholera, Mitropolsky recommends internal administration of salol in 5-grain doses every hour. Also give a mixture consisting of 20 drops of tincture of opium *Ph. Russ.*, 1 ounce of dilute hydrochloric acid, and 6 ounces of marsh-mallow root, the dose being one tablespoonful every hour. An interval of half an hour should elapse between the mixture and the salol.

Atropine in Cholera.—Koroltchuck states that the most characteristic symptoms of cholera closely resemble those induced by muscarine, or ptomaines, or toxics of the muscular group, and suggests that, as atropine is a powerful antidote in muscorine poisoning, that the algid stage of cholera be treated by hypodermic injections of the drug. On the other hand, Manasseïn doubts its efficiency, and argues that, at any rate, it must be cautiously used, because, after the subsidence of algid manifestations, and after the return of the patient's circulation and absorption to the standard point, toxic symptoms may develop.

Quinine in Cholera.—Niedzwiecki recommends subcutaneous injections of quinine. The formula is:

℞.—Quinini bihydrochlorici..... grams xxx.
Aq. destil. ebullientis...q.s. ad 100 grams.
Sodii chloridii..... grams o.vi.

M.—S. Two (Lewin) syringefuls (= 1.2 gr. of the bihydrochlorate) to be injected on the first day; later on, from 1 to 2 syringefuls daily.

After the cessation of vomiting, a combination of the quinine salt with salicylate of bismuth and opium should be given internally. Of adjuvants, morphine should be used subcutaneously when abdominal pains are present. Enemata of tannic acid should also be given, while in the algid stage, hypodermic injections of a physiological saline solution should be used.

It has been pointed out that Botkin, during the epidemic in St. Petersburg in 1871, treated cholera with the following mixture:

℞.—Liq anodyni (Hoffman's),
Tinct. quinæ compositæ, *Ph. Russ.* ää ℥j.
Quininæ hydrochlorici..... ℈j.
Acidi hydrochlorici diluti..... ℈jss.
Olei menthæ piperitæ..... gtt. x.
Tinct. opii simpl., *Ph. Russ*..... ℈ij.

M.—S. From 20 to 30 drops to be given every two hours.

Tinct. quinæ comp. vel. elixir roborans Whyttii, *Ph. Russ.*, is prepared of 3 parts of grey cinchona bark, 1 gentian root, 1 flavedo corticis aurantii, 16 of a 90 per cent. spirit of wine, and 8 cinnamon water. Tinct. opii simpl., *Ph. Russ.*, contains 1 in 10 of opium.

Oxygen and Hot Baths in Cholera.—Trivus speaks of good results from inhalation of oxygen in the vomiting of cholera as well as in the algid stage. Also, that hot baths (30° Réaum.) are excellent on cramps and vomiting. In algid cases the bath water should not reach above the patient's navel.

Chronic Consumption Late in Life.—In conclusion, I may give you, before demonstrating the cases to you, a short summary of the various points I have touched on.

1. The disease, while relatively less frequent than in early adult life, is still not uncommonly met with.

2. It more commonly attacks males than females.

3. The influence of heredity, although less marked, can still be traced in some of the cases.

4. The disease is essentially chronic in form.

5. It is in a considerable number of cases limited to one lung.

6. Tubercular disease of the larynx and intestines is found in as great a proportion of the fatal cases as in earlier life.

7. The onset is usually insidious.

8. Cough with emaciation and debility should always suggest the possibility of phthisis in an elderly person.

9. Hæmoptysis is less frequent, except in the later stages, when there is considerable risk of profuse and possibly fatal hemorrhage.

10. The symptoms of disease are sometimes quite misleading, being abdominal in type, suggestive of malignant disease, and generally arising from intestinal or peritoneal tubercle.

11. Sometimes the physical signs are best marked at the apex posteriorly.

12. Sometimes the disease is complicated with chronic bronchitis and emphysema, which mask the physical signs, and then is easily overlooked, unless the sputum is examined for bacilli.

13. The duration of the disease is essentially protracted, but difficult to determine clinically on account of the gradual onset of the illness.

14. The maintenance of strength and nutrition, and the quietness of the pulse are most encouraging as regards prognosis, while the opposite and the occurrence of complications are of grave omen. —H. W. G. Mackenzie, in *Med. Press and Circ.*

Gonorrhœal Septicæmia.—Dr. Rugy describes a fatal case of this not uncommon complication of gonorrhœa. This happened in a case occurring in his practice, and he ascribes it as due to the fact that the patient was somewhat advanced in years (sixty-two); that it was his first attack of gonorrhœa, and that his constitution was weakened by long years of alcoholic excess. He complained of an urethral discharge, which had existed for three days. On examination there was a plentiful sanguineous purulent discharge. Alum was resorted to, and Condy's injection and an alkaline solution. Three days later he had some pain in the left side, greater pain in the right knee, shoulder and wrist, which last was much swollen. There was considerable effusion into the right knee; the left ankle red and swollen; the soles of the feet painful when touched. Conjunctivæ and sclerotic of both eyes were injected. Temperature 100° F. Iodide of potassium and opium were prescribed. At the expiration of four more days the pain in the joints had abated, but they were swollen so that he could not move them. Temperature at noon of the last day was 101.5°; pulse 120, feeble. At 10 P. M.: Temperature 107°. He died an hour later.

The hyperpyrexia in this case appears to point strongly to the septicæmic origin of the complaint, probably from the rupture of some small vein in the urethra, through which absorption took place. The hyperpyrexia occurred within a few hours of death. Previously the temperature had varied from 100° to 101.5°.

May not a considerable number of cases of hyperpyrexia ordinarily attributed to rheumatism possibly have their origin in gonorrhœa? Is it a mere coincidence that so called gonorrhœal synovitis and hyperpyrexia of rheumatism is greatly more common in the male than in the female sex? If the case of my patient should be held to point to a septicæmic origin, would it not be well to discard the terms "gonorrhœal rheumatism," "synovitis," or "arthritis" in favor of "gonorrhœal septicæmia?" It would clear the ground for a rational treatment, for if we cannot by any known drug kill the micrococci when they have once obtained access to the system, yet we can avoid doing harm by giving salicylates, etc. If given at the first onset of joint pain quinine in fairly large doses, combined with sufficient opium to control the pain, would appear to offer the best chance of success.

—*The Lancet.*

Immunity Against Typhoid.—Bruschettini, in his experiments to obtain cultures affording immunity against typhoid, tried the effect of cultures in rabbit's blood, and found that the liquid portions, when injected under the skin, did not cause death, but a prolonged rise of temperature and progressive wasting. Injections into the peritoneum caused death in from three to five days, preceded by a rise of temperature and wasting. Injections into the blood of 3 to 5 c. c. of similar cultures also caused death with the same symptoms in rabbits after about four days. He found it possible to obtain immunity to the disease with the aid of these cultures, heated for an hour at 60° C., and also with old gelatine and broth cultures; that to obtain such a result, it is necessary to employ about 20 c. c. of heated blood culture, or 50 c. c. of old broth or gelatine cultures, given subcutaneously; that the serum of such immunized animals has great bactericidal powers in relation to the typhoid bacillus, much greater than that of the normal rabbit; finally, the serum of such immunized rabbits possesses marked antitoxic actions against the typhoid bacillus.

ACONITE POISONING.—Robinson reports the case of a soldier who, after a debauch, took about 2 drachms of tincture of aconite. One hour later he was recumbent, tossing his limbs about and complaining of cramps in the arms and hands; his radial pulse was imperceptible, carotid 119, respirations 10, pupils slightly dilated but sensitive, nose pinched, extremities cold, face bedewed with cold sweat; at times he lapsed into unconsciousness. Between $\frac{1}{10}$ and $\frac{1}{5}$ grain of apomorphine, hypodermically, produced vomiting, and the stomach was thoroughly washed out. At intervals during four hours—by which time he was out of danger—he was given hypodermic injections, amounting in all to 25 minims of tincture of digitalis, 45 minims of aromatic spirits of ammonia, and 2 drachms of brandy.

He considers digitalis as superior to atropine or strychnine as an antidote to aconite, but that stimulants must also be used to gain time for the digitalis to act.

REFLEX SPASM OF THE GLOTTIS FOLLOWING DISTENSION OF THE STOMACH.—In India a soldier, who had been for a few days without meat, gorged himself with tough, uncooked meat in pieces varying from four to seven inches in length. He then drank much water, and sang for about an hour, when he was affected with occasional pain in the larynx and with cough. Gradually dyspnœa succeeded, which prevented his sleeping. Promptly taken to the hospital, examination showed nothing visible beyond distension of the stomach. The obstruction to breathing seemed to be in the larynx. His speech was whispering, and altered in quality. He complained of pain over the hepatic area. Hot fomentations to the larynx and occasional inhalations of chloroform were administered, but their effect was transitory. The spasm prevented him from swallowing an emetic. Blisters were then applied along the course of the vagi, and cupping over his stomach repeatedly performed. In about half an hour the result was well marked, the spasms stopping for a time. Finally an emetic was taken, and about a pound and a half of meat vomited. His symptoms hence improved, though for three days he had a spasmodic laryngeal cough. For want of an instrument no laryngeal examination could be made. The day after the meal hepatitis appeared, but was easily cured. As soon as the laryngeal symptoms abated the patient could swallow freely, so that direct pressure on the larynx by a mass of meat in the œsophagus was out of the question; while the marked effect of the counter-irritation of the vagus seemed to point to the symptoms being due to reflex irritation from the stomach.—*The Lancet.*

GLYCOSURIA WITH LOW SPECIFIC GRAVITY OF THE URINE.—Dr. Nicholson urges the absolute necessity of careful examination of the urine, even with normal specific gravity. In the case of a lady of sixty-five years, whose history was that of occasional afflictions from pruritus, eczema, etc., who complained of what she called "piles"—burning and itching of anus, dragging pains across lumbar region, and depression of spirits, he says, that as her father and brother were gouty, his treatment was conditioned thereby. Her appetite was fair, but the bowels would not act without aperients; polyuria not marked; heart, lungs, etc., normal; pulse 72, regular, good tension. The urine had specific gravity of 1,022; was pale, limpid, and slightly acid. As he found, on rough examination, that she was passing about four grains of sugar in the ounce of urine, he placed the patient on strict diabetic diet; stychnine, euonymin pill at night, with mineral water in the morning. In about three weeks every trace of sugar disappeared, and the specific gravity went down to 1,010. At the end of four more weeks the strict diet was relaxed, though still sugar and limited starch were prohibited.

TREATMENT OF FILARIA SANGUINIS HOMINIS.—Dr. Manson believes that the filaria stands to chyluria in about the same relation as rheumatic fever stands to heart disease and gonorrhœa to urethral stricture; it starts the disease process, but its continual presence is not necessary for keeping it up. To attempt a cure by the administration of a parasiticide is as useless as to attempt to cure established heart-disease by salicylates or stricture of the urethra by astringent injections. In a case under his observation, he argues that, although the parent filaria was necessary for the production of the lesion in the thoracic duct, its constant presence there was not required for the maintenance of the lesion. He cannot see the benefit

of killing either the embyro or the parent filaria, or how an anthelmintic, even supposing it were effective as such, can possibly cure chyluria. A knowledge of the pathology of chyluria, elephantiasis, etc., makes it evident that our endeavors should be directed to keeping the parasite alive and in a healthy condition. There is much evidence to show that under normal conditions the filaria is innocuous, and that it is only when abnormally located, or when, from some cause, the contents of its uterus are prematurely evacuated, or when it dies, that this parasite becomes a danger to its human host. He argues that the cause of the obstruction of the lymphatic circulation, which produces elephantiasis, is the embolism of the after-cut vessels of the lymphatic glands by prematurely expelled ova from an aborting female filaria, and that therefore it becomes impossible for the filaria embryos to enter the circulation. From this he concludes that while it is a rare thing to find filaria in the blood, yet to them is due the production of elephantiasis. The proper treatment of chyluria should be rest, elevation, lowering of the tension in the lymphatic vessels by the use of saline purgatives, limited and suitable food, very limited use of fluids.—*The Lancet.*

Ipecacuanha in Dysentery.—Dr. Arthur H. Hart reports the case of a woman admitted into the French hospital at Suez. Her condition was as follows: State of great prostration. Temperature 38°; abdominal tympanites and tenderness; hepatic fullness and intense sensitiveness, dysuria and diarrhœa. The stools of the usual slimy dysenteric character. Twenty minims of tincture of opium were administered in a little water at once, followed in half an hour by ½ a drachm of ipecacuanha powder. Turpentine stupes were applied to the abdomen and the opium enema of the P. B. given. Some hours later ½ a gramme of quinine was given in a cachet. The treatment acted so promptly in stopping diarrhœa and easing pain that at night 15 minims of laudanum, followed by 1 gramme of ipecacuanha, was again given, with another opium enema. The first day she was only allowed hot milk to drink. She had four stools in the twenty-four hours, the temperature being 38.6° C. The ipecacuanha caused a good deal of vomiting. The following powder was prescribed: Two grains of salicylate of bismuth, 1 grain of sulphate of quinine, 1 grain of naphthol, ⅓ of a grain of opium powder. This powder was divided into four cachets, one being taken every three hours. The opium enemata and turpentine stupes were continued. Milk and soda-water or barley-water was all the diet permitted. Next day the patient was comfortable; temperature 38° C.; bowels moved three times in twenty-four hours. No abdominal pain. Allowed milk, bread and bouillon. Medicine to be repeated. Two days later the temperature was 37.8° C., the patient passing natural stools. Gets up during the day and takes more solid food. Ordered a gramme of quinine and carbonate of ammonia instead of the bismuth preparation. Two days more and a slight return of the diarrhœa stopped by 10 grains of Dover's powder.

The great difficulty we have to deal with in dysentery is exalted peristalsis. Ipecacuanha meets the difficulty by acting as an intestinal muscular sedative. A large dose stops tenesmus quite suddenly, and smaller subsequent doses prevent its return. The mucous membrane becomes in a suitable condition for the second action of ipecacuanha to come into play—namely, secretory stimulation. We have now to deal with an enteritis, and here ipecacuanha acts in the same way as in bronchitis. In a certain proportion of cases where ipecacuanha fails it is because it is given too late. In those cases where it fails when success ought to have come, the fault may be attributed to the lack of strict attention as to the diet. Beef tea, bread, or any light foods are fatal to the successful administration of ipecacuanha. —*The Lancet.*

Myxœdema.—Two cases are reported by Brown Séquard and d'Arsouval, in which every prestige of the disease had vanished after ten days' treatment by injections of a liquid obtain from the thyroid gland. They also announce that animals deprived of their supra-renal capsules nearly regain their normal condition through injections of a liquid extract obtained from the supra-renal capsules.

Following are the conclusions reached:

1. Liquid extracts of all the viscera, of the glands and other portions of the organism, may be injected under the skin even in considerable quantity with perfect safety.

2. Experimental facts in accordance with clinical facts show the curative power of subcutaneous injections of extract of the thyroid, in cases of Graves' disease depending on the absence of action of the thyroid gland, and give considerable support to a therapeutic method proposed by us a long time since.

3. We have every reason to believe, after the experiments which we have reported, that death, in diseases of the suprarenal capsules, may be retarded, if not absolutely prevented, by injections of liquid extract of these glands taken from an animal in good health.

Dr. Wallace Beatty, of Dublin, published a case about six months ago of myxœdema in a woman of forty-five years, cured by massage and injections of a preparation of the thyroid body of the sheep. In this case there was extreme lassitude, difficulty in speech, feeble memory, sensation of cold, etc., with absence of the gland. After treatment the œdema disappeared, speech, became natural, could walk without fatigue, memory returned, and menstruation, which had disappeared, was re-established; in fact, the case was looked upon as one of cure.—*Med. Abstract.*

Treatment of Apparent Death in Drowning.—M. Laborde recently stated before the Académie de Médecine that two persons apparently dead from drowning were resuscitated by drawing the tongue strongly out of the mouth and repeating the action many times; there is immediately produced a sort of spasmodic inspiration and a flood of liquid is thrown out by vomiting repeated and abundant. In one of the cases the ordinary methods of artificial respiration had been used in vain for about an hour. The efficacy of the excitation of the base of the tongue, and especially of its traction, is due to the awakening of the respiratory reflex. The traction should be rhythmic and imitate after a fashion the function which it seeks to set in motion. It being objected that this method necessitated the persistence of reflexes, M. Laborde stated that the persistence of the reflexes was a *sine qua non* for the return to life, as well with his proceeding as for that of Marshall-Hall and of Sylvester.

Yawning as a Therapeutic Measure (Dr. O. Naegeli).—In certain affections of the throat, such as acute pharyngitis and catarrh of the Eustachian tube, with pain in the ear and deafness, excellent results may be obtained by making the patients take many times a day, a series of successive yawns. There is an almost instant improvement in the symptoms, especially of the pain. The movement of the muscles in the act of gaping, acts as a sort of massage.

Hydrastis Canadensis in the Treatment of the Vomiting of Pregnancy.—In four successive cases of persistent vomiting, a Russian gynæcologist, Dr. P. Fedorow, has obtained rapid and complete success by the administration of the fluid extract of hydrastis canadensis, in doses of 20 drops, repeated four times a day. The drug acts, according to the author, by lowering the blood pressure, by relieving the uterine congestion, and by calming hyper-excitability of the vasomotor centers of the gastro-intestinal tube.

Paralysis Agitans.—Charcot has developed a new method of treatment. He noted the curious fact that patients showed marked improvement while making long journeys by rail, or in a carriage. The greater the speed or the jolting the more evident was the improvement. He accordingly had a vibrating chair constructed, and found the same benefit derived from fifteen-minute sittings in it. This was true not only of paralysis agitans, but of neurasthenic cases in general.

Gilles de la Tourette has applied the principle to the treatment of hemicrania and nervous headache, by means of a vibrating helmet, surmounted by an electric motor, giving six hundred vibrations a minute.—*Med. Abstract.*

Subcutaneous Injections of Digitalis.—According to a Russian doctor, Zienetz, good results may be obtained in cardiac affections with troubles of compensation, by small doses of digitalis given hypodermically, where the drug given by the mouth has an insufficient action. He makes an infusion of one part of the leaves to thirty parts of boiling water, of which he gives the contents of a Pravaz syringe two or three times a day.

Treatment of Professional Spasms.—Dr. Benedict, of Vienna, has discovered that certain functional spasms, accompa-

nied by clearly localized pains, yield to hypodermic injections of a solution of phenic acid, made at the painful points. In this manner he cured a piano player, and a young man who had suffered from writer's cramp for five years.

TREATMENT OF ZONA.—Brocq employs the following:

℞.—Boric acid..... gr. xv.
Oxide zinc,
Powd. starch.....āā gr. xxx.
Albolene..... ℥iss.
Lanolin..... ℥ii¼.

By means of a needle previously passed through the flame, open carefully all the vesicles of the zona; then wash the parts with boric water containing a little alcohol; cover with the above paste; powder with starch and spread over the whole a thick wad of tow. If the pain is too great add muriate of morphine or cocaine to the above formula.

PILLS FOR THE PAINS OF POST-PARTEM UTERINE COLIC (Rutherford.)—

℞.—Quinine sulph..... gr. xv.
Powd. opium..... gr. viij.
Extract of trifolium..... q. s.

For 15 pills. One pill every two or three hours until the cessation of the pains.

News and Miscellany.

FIFTEEN Chicago dairymen have been indicted by the Board of Health for selling milk from cows fed on garbage.

OF fifty doctors who volunteered to go to Hamburg during the cholera season hardly any escaped an attack of that disease.

DR. CHARLES F. MCGAHAN, of Chattanooga, Tennessee, has removed to Aiken, South Carolina, where he will occupy the residence and office of the late Dr. William H. Geddings.

DR. COLCLOUGH is convinced that under ordinary conditions, small-pox is not infectious until the second or third day of the eruption; that early recognition and prompt isolation are the important steps to take, and that all persons exposed to infection should be at once re-vaccinated if two years have elapsed since the last successful vaccination.

THE hat question is decided by a contemporary in favor of its utility and benefits, provided the two points of lightness of pressure on the head and the admission of air through apertures are attained.

IN the hemorrhagic form of small-pox, the eruption may not be forthcoming, and if nothing is known of the patient's history or of his exposure to infection, it is not always easy to detect at first sight.

ONE of the medical journals of Philadelphia is pounding away, in labored editorials, at the question of a revision of our code of ethics. This journal, under its present management, concedes that the code needs revision. A few years since such a statement from a New York doctor nearly caused a convulsion among editors in Philadelphia.

Dear neighbor, codes need not trouble you. What Pennsylvania needs is a good law creating a board of medical examiners. Improve the quality of physicians. Make them all pass an honest State examination, homœopaths and regulars alike, and codes will be unnecessary. A little more knowledge, and a little less, not of ethics, but of talk about ethics, is what the profession of this country needs.

—*The Post-Graduate.*

SOME time ago I had occasion to refer in these columns to the case of Dr. Collins, an ex-military surgeon-major, well known in this country and in Canada, and who, up till last spring, possessed one of the largest and most fashionable practices among ladies in London.

According to his own written confession, he had forged the endorsement of his friend, Captain Selwyn, the step-son of Col. Hughes-Hallett, to a promissory note.

It may be remembered that Captain Selwyn, after taking the advice of his friends, Lord Walsingham and the Prince of Wales' equerry, Sir Nigel Kingscote, determined not to prosecute the doctor on the condition that he left the country within six months. As he failed to do this he was arrested on a charge of forgery.

The jury acquitted the doctor notwithstanding his confession, and I now understand that he has once more resumed his practice in Mayfair, just as if nothing had happened.—*News-Record.*

THE annual meeting of the Board of Directors of the Chicago Charity Hospital, 2407 Dearborn street, was held October 13. The Secretary's report showed that something over three thousand men, women and children had been treated within the last year. Several new members were added to their staff of physicians, and the general needs and demands of the institution were discussed.

This hospital is unique in its way, being the only exclusively free hospital in Chicago. No pay patients are taken under any consideration. Nor will it entertain any patient who is able to obtain treatment elsewhere. Any indigent person, without regard to nationality, age or sex, receives treatment, food and shelter without cost. There are no salaried officers or physicians connected with the institution. Its clinique includes gynecology, surgery, nose and throat, eye and ear, nervous and general medical—all except contagious diseases. Each department is presided over by a specialist, who gives his time, gratis, one day in each week, or oftener if necessary.

Prominent among these physicians are Drs. H. T. Byford, Joseph T. Bacon, F. H. Martin, D. A. K. Steele, John T. Binkley, Dudlie C. Trott, F. B. Robinson, Silas T. Yount, T. M. Hardie, Rosa Engleman, and Robert Dodds.

The demand for such an institution was brought before a number of prominent ladies by several physicians about three years ago. With quick womanly sympathy these ladies called a meeting at the Palmer House, to see what could be done to relieve the suffering of the many worthy poor who come under the observations of physicians every day. At this meeting were Mesdames Thomas Burrows, Cyrus H. McCormick, Jr., Clifford Payson, Volney C. Turner, H. M. Wilmarth, J. M. Flower, and F. H. Martin.

Enough money was subscribed to start the work, and Mrs. Wilmarth was chosen President, with Mrs. Martin as Secretary. Rooms were secured at 31 Washington street. These soon became inadequate, and a meeting was called to see what should be done. It was decided to give an entertainment, and use the proceeds toward buying a building. Accordingly "Cinderella" was given at the Auditorium under the management of Mr. Walter Carr. This entertainment netted $4,000, which applied as part payment on the present building and its appurtenances.

The organization, the promoters say, is much in need of funds at the present time, there being a debt of $7,000 on the building at present.

A visit through the wards showed the white beds nearly all filled. Flowers bloomed in the windows, and a general air of cheerfulness was everywhere present. Many critical operations have been performed, and in all cases patients receive the same care they would if they were paying large sums for treatment. There are many middle aged women among the patients, plainly very poor, but they seem very grateful for the kindness shown them.

Last summer the hospital was swindled out of quite a sum of money by a bogus collector. To guard against future impostors it was decided that all contributions should be sent to Mrs. F. H. Martin, Treasurer, 3210 Lake Park avenue.

—*News-Record.*

ABSTRACT OF PROCEEDINGS OF MICHIGAN STATE BOARD OF HEALTH, LANSING, OCTOBER 11, 1892.—The following named members were present: Arthur Hazlewood, M.D., Grand Rapids; Mason W. Gray, M.D., Pontiac; Prof. Delos Fall, M.D., Albion; Hon. Frank Wells, President *pro tem.*, Lansing, and Henry B. Baker, M.D., Secretary, Lansing.

The Secretary presented his report of work done in the office during the last quarter. A large part of it was in the direction of efforts for the prevention of the introduction of cholera. On account of the possibility of the introduction of cholera, there was a large number of telegraphic and written communications which were out of the ordinary line of work, and needed prompt attention. The three pamphlets on the "Restriction and Prevention of Consumption, Scarlet Fever, and Diphtheria," were revised and reprinted. There was an unusual call for the pamphlet on cholera; one city asked for five thousand copies. Not so many were sent, but a large number were distributed. The pamphlet on the "Restriction of Cholera" was revised, but is not yet reprinted.

Samples of proposed International Health Tickets were presented from the Secretary of the American Public Health Association, who was a committee of the International Conference of State Boards of Health. It is proposed to have these tickets adopted throughout the continent.

The tickets to be issued to immigrants by the inspector at the place of debarkation, and to be carried until taken up by the local inspector at the immigrant's final destination. By a note, in different languages, the immigrant is made to understand that it is to his advantage to keep the ticket in his possession. These tickets are to convey, by parts punched out at starting place and by inspectors along the line, valuable information to all the inspectors, who are to possess the key; such facts as name of possessor of ticket; date of issue; whether or not from an infected locality; the name of the disease with which the immigrant is possibly infected or exposed; where and how long detained; how the person, clothing on the person, and baggage had been disinfected, and other facts which might save detention, disinfection, etc., or lead to careful surveilance for the time of probable danger. The Secretary had suggested amendments, and it is hoped that this ticket system may soon be perfected. Those in use at present do not convey the necessary information, and by the Michigan State Inspectors very little reliance is placed on them.

Secretary Baker remarked that the cholera having ceased in New York, and the newspapers having much less to say of cholera, the public seem to have concluded that the danger of the introduction of cholera has ceased. A few health officials seem to have the same view. Holding the view that the danger of the introduction of cholera has not lessened, except that the numbers of immigrants are less, and desiring to know the views of prominent and neighboring sanitary officials, the Secretary had addressed a circular letter to them. Another point on which he desired to learn their views, was the question of the relative danger of the introduction of cholera by immigrants coming from ports not known to be infected, compared with immigrants coming in a ship on which cholera had occurred, from a port known to be infected, such a vessel for instance, as the "Normandia," which was detained so long in the port of New York, and whose passengers had been so dealt with as to make it probable that they would not convey cholera; his own view being that the danger was greatest from baggage which may find its way from some of the many cholera infected centers to an uninfected port, from which it would come to this country, and, because from an uninfected port, pass quarantine without detention or disinfection. In response to his questions, letters were received from Dr. J. T. Reeve, Secretary Wisconsin State Board; Dr. J. F. Kennedy, Secretary Iowa State Board; Dr. F. H. DeVaux, Secretary North Dakota Board; Dr. J. N. McCormick, of Kentucky, President of the International Conference State Boards of Health, and also Dr. Walter Wyman, Supervising Surgeon-General U. S. Marine Hospital Service, who says: "Your views concerning the great danger of the introduction of cholera through the medium of baggage of immigrants arriving from some port believed to be uninfected, and upon a vessel without any history of infection, are entirely in accord with my own, which I expressed in a letter to the Secretary of the Treasury as early as July 7." Telegrams were received from Dr. Lachapelle, President Provincial Board of Health, Quebec; Dr. C. N. Hewitt, Secretary Minnesota State Board, and Dr. F. W. Reilly, Secretary Illinois State Board.

Dr. Reilly said: "Without endorsing the principle of a detention quarantine of a fixed number of days under ordinary circumstances, the Illinois State Board approves the action of the Michigan State Board of Health in enforcing a twenty days' quarantine on immigrants from European ports seeking entry into the United States through the Dominion of Canada. This action is approved because it is believed immigrants are shipped through Canada for the purpose of evading the United States twenty days' quarantine. In the judgment of the Illinois Board, the United States quarantine is defensible, on the ground that its effect, if not evaded, would be practically to prohibit immigration until danger of cholera importation had passed."

Besides the communications from State officers already mentioned, other letters were received. U. O. B. Wingate, M.D., Health Commissioner of Milwaukee, in his reply, said: "I certainly do not think that we should relinquish any vigilance in this matter during the winter, and that, as you say, there is a great deal more danger of having the germs introduced into this country from unexpected sources, than from vessels that we know are infected. * * * I do not think the Northwest should rely entirely on the quaran-

tine at our seaports, knowing as we do how imperfect disinfection is at certain stations, but that a double quarantine and disinfection should be established in the country to protect this part, for we are peculiarly situated in regard to exposure, being subjected to the enormous number of immigrants that are locating in and passing through the Northwest. I believe, with you, that this is not a matter confined to the World's Fair alone, but it is a matter which affects the whole prosperity of this part of the country."

John D. Ware, M.D., Health Commissioner of Chicago, in his reply, said: "I think as you do in relation to immigration to this country by the way of the St. Lawrence and points in Canada. I believe that your order relative to quarantine is a most excellent one, and so far as this department is concerned, I wish that it was carried out with all ports of entry. * * * I am also greatly in favor of the methods of inspection and disinfection, no matter what the cost may be, of the maintenance of such quarantines and inspection; the money could not be more profitably spent, and the probable good results from such a course would be beyond all computation. As you say, many seem to think that with the cessation of cholera in the port of New York, danger no longer exists from the introduction of cholera. I believe that there is danger, even at present, not only from those immigrants and the baggage of such immigrants as may be known to have been infected, or those immigrants who may have come from infected ships, but those who have not been on infected ships, who may by some chance have come in contact with the germs."

The general tenor of the letters and telegrams is, that the danger of cholera is not yet passed; that it will probably be greater next summer; that a danger to be especially guarded against is by baggage in some way infected, brought in by immigrants not sick, in uninfected vessels, and from uninfected ports, therefore being allowed to pass quarantine at the seaboard without disinfection; that until seaboard quarantines are more perfect, and the system of tickets of sanitary information more satisfactory, it seems important to have a line of inspection and of *disinfection* from Sault Ste. Marie, southward, to Lake Erie, and preferably as far south as Kentucky.

The subject was thoroughly discussed. The following resolution was adopted:

Resolved, That the quarantine orders and Rules of the Michigan State Board of Health heretofore issued, including the published requirements formulated by the Executive Committee of the Board, be continued, and that they be extended so as to apply to all immigrants entering Michigan; and that the Executive Committee be continued, with power to act.

It takes time to organize an efficient system of inspection and disinfection; unexpected difficulties are to be met and overcome. One surprise to the State Board of Health was the opposition to its published rules by the Detroit Board of Health. However, it seems now that the inspection and disinfection are proceeding quite satisfactorily; the United States inspectors are working in harmony with the State Board's rules, the Customs Officers coöperate, the railroad companies supply the steam for disinfection, and their officers and employés give substantial aid. The spirit of the railroad companies is well shown by a letter from the District Passenger Agent, C. Sheehy, of the Canadian Pacific Railway Co., at Detroit, as follows: "This company is perfectly satisfied with the arrangements that were made here for the passing of immigrants. We have carried out as best we could, all the recommendations and suggestions made by yourself and the Hon. Mr. Wells, when you were in Detroit and Windsor. If there is any thing that we can do or have done to aid or assist your Board in carrying out your rules and regulations, we will make every effort in our power to comply with your wishes and instructions."

Before adjourning, the Board appointed a committee to memorialize the President of the United States for a more effective health organization for the United States.

THE THAMES WATER PATHOGENETICALLY CONSIDERED.—Sir George Buchanan, before the Royal Commission on Metropolitan Water Supply, of London, stated there was no evidence derivable from tests of the quality of the drinking water, whether organisms hurtful to the human species did or did not exist in water after filtration. No available test could be trusted to prove that the water was not responsible for typhoid fever outbreaks; that, though poisonous organic matter might be present or absent, the pathogenical qualities of the water were not distinguishable. He could investigate organisms present microscopically, or have

albuminoid ammonia, nitrates, etc., determined chemically, but that the water contained impurities injurious to health, such examination would fail to show. Nor could any analysis of any sample of water give him light as to the hurtfulness of the organisms. No determination could now state whether the water was or was not free from hurtful elements, nor could innocuous bacteria be distinguished at present from morbid elements.

Regarding water purposely polluted, it was certain it had been rendered dangerous, but the chemists could not tell what the danger was. He knew not what number of microbes were visible by the microscope after repeated filtration had been made, or after the micrographic element had been carried down by use of Clark's softening process to such water. Dupré had indicated that the change in the amount of oxygen present in the dissolved air of a water kept under observation might establish whether growing microphytes were present or not, and by observing the extent of the change, the amount and activity of microphytic impurity might be judged. Investigations of the life-history of bacteria in water were important, to determine what were their relative hostilities, to what extent one kind, whether by changes in the oxygenation of the water, or by destroying weaker, pathogenic, or opposite kinds, ultimately aided in purifying the water. As to testing water purposely polluted, Dr. Cory had shown that, if we could be sure that it was derived solely from healthy bodies, we might run no serious risk, though it were as foul as that of the Holy Well ("Zemzem") at the Caaba in Mecca —stuff which was saline with urine, and yielding to analysis six times as much animal matter as is found in the same volume of London sewage. There is no reason to believe that the quantity of disease-producing material in the (Thames) water is proportionate to the amount of total organic, or total animal matter.

—*Brit. Med. Journal.*

GROUND FOR DOUBT. — Timorous Stranger—"Is this really Chicago?"

Resident—"Yes, sir."

Visitor—"I won't believe it. I've been here now goin' on three hours, and the $15 I left home with is in my pocket still."

—*News-Record.*

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I WOULD also allude to cases of diarrhœa and vomiting, and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,

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PAGE

ORIGINAL ARTICLES:

FOREIGN BODIES IN THE CORNEA. By Edward Jackson, M.D. - - - - - - - - - - - - - - - 473
SYMPHYSIOTOMY, WITH THE REPORT OF AN OPERATION. By Barton Cooke Hirst, M.D. - - - - - 476

SOCIETY NOTES:

AMERICAN ELECTRO THERAPEUTIC ASSOCIATION - 478

THE POLYCLINIC:

MEDICO-CHIRURGICAL COLLEGE—Hernia and Hydrocele—Scalp Wound—"The Antiphlogistic Touch—Urethrocele—A Source of Septic Infection—Aphthæ—Measles - - - - - - - - - - - 484-485

EDITORIAL:

WHY PHYSICIANS SHOULD SPECIFY - - - - - - 486

ANNOTATION:

Golden Rules of Surgical Practice - - - - - - - 487

LETTER TO THE EDITOR:

How to Give Mercury in Syphilis - - - - - - - 487

THE MEDICAL DIGEST:

Operation for Perityphlitis (*Centralblatt für Chirurgie*)—Mixture Against Vomiting—Villacabras Mineral Water (*W. F. W.*)—Dermatol (*Coloranti*)—Maggots in the Ear (*Dolph*)—Secret Specifics for Inebriety (*Kerr*)—A Growing Child's Food (*Scoville*)—Treatment of Delirium Tremens (*Kerr*)—Mental Derangements from Organic Sulphur Compounds (*Richardson*)—Lack of Hæmatine the Cause of Anæmia (*Maurel*)—Methods of Operation for Carcinoma of the Rectum (*Centralblatt für Chirurgie*)—Muscle-building (*Checkley*)—Bright's Disease (*Lancereaux*)—Human and Fowl Tuberculosis (*Parsons*)—Trichinosis (*Memphis Journal*)—Some Thoughts about Dyspepsia (*Young*)—Sodium Salicylate as Dressing for Wounds (*Hall*)—Treatment of Syphilis (*Hot Springs Med. Jour.*)—Sulphite of Zinc as an Antiseptic in Typhoid and Cholera (*Med. Press.*) - - - - - - - 485, 487-493

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—Coryza; Chronic Pharyngitis: Ozema (*Revue Internat. de Rhinologie O and L.*)—Extraction of a Needle from the Larynx (*Goris*)—Anti Cholera Scapulary (*Echo*)—A Motto (*Gabriel Charmes*)—Caustic Potash for Ingrowing Nails (*Parckhauer*) Post Grippal Spasmodic Cough (*Oddo*)—Treatment of Diphtheria by Chromic Acid (*Lescure*)—The Use of Citric Acid as a Means for the Sterilization of Water During Cholera Epidemics (*Christmas*)—Treatment of Cholera by Chloroform Compound (*Desprez*)—Iodoform Bougies (*La Medicine Moderne*)—Treatment of Erysipelas (*d'Amore*)—Physiological and Therapeutical Action of Somnal (*Myers*) - - - - - - - - - - - - - - - 494-497

GERMAN NOTES. *Marcus*—Cholera in Germany—Local Application of Chromic Acid in the Treatment of Syphilitic Affections of the Mouth (*Fribar*)—Therapie of Cholera (*Rosenbach*)—Specific Action of Salol in Cholera (*Loewenthal*)—Ipecacuanha as an Oxytocic (*Der. Ærtzl. Pract.*)—Methyl Blue in the Treatment of Malaria and Gonorrhœa (*Trintignau*) - - - - - - - - - 497-499

NEWS AND MISCELLANY - - - - - - - - - - 499
MEDICAL CORPS, U. S. NAVY - - - - - - - - 500
NOTES AND ITEMS - - - - - - - - - - iv, viii, ix

Original Articles

FOREIGN BODIES IN THE CORNEA.[1]

BY EDWARD JACKSON, M.D.,

Professor of Diseases of the Eye in the Philadelphia Polyclinic; Surgeon to Wills Eye Hospital.

THE history given by the patient, as to a foreign body in the cornea, is often worthless. If the foreign body is but partly imbedded, and the projecting portion hard and angular, so that every movement of the lid causes a scratching of the conjunctiva lining it, the patient, of course, immediately notices its presence, and can give a correct and definite history of its occurrence. But if the foreign body be deeply imbedded so that it does not touch the conjunctiva of the lid, or if it lie with a perfectly smooth surface presenting to the lid, its entrance may not be noticed, or the momentary disturbance caused by it may be so slight as to be forgotten before the secondary effects of its presence draw attention to the eye, and even if those secondary effects are ascribed to it, and the foreign body itself perceived, it may be supposed to have entered the eye at a time considerably later than was the case. Often, however, the patient will, on account of the gradual advent of the symptoms of irritation, ascribe them to an entirely different cause.

Again, very many patients come with the impression that a foreign body is in the eye, from the irritation—the sensation of scratching—caused by a simple conjunctivitis. And these, having thought the matter over carefully and repeatedly, can usually tell just when and how the mythical foreign body was lodged there. And they even go so far as to accurately locate it, by picking out some spot on the iris not before noticed, and regarding it as the offending object.

[1] Read at the Philadelphia County Medical Society, October 12, 1892.

For the diagnosis of a foreign body in the cornea we must depend on, what generally is the sufficient basis for a diagnosis in diseases of the eye, the results of our examination of the patient. If the foreign body is comparatively large, the most casual glance may reveal its presence, but often there is need for special methods and a prolonged search before its presence or absence is established; and even where its presence is perfectly obvious at the first glance, these same methods must often be employed to make sure that we have completed its removal.

In the search for the foreign body, the important idea with reference to the illumination of the eye is that it shall be thoroughly under the control of the surgeon, so that he may either strongly illuminate the cornea itself, and view it against a dark background of unilluminated iris and pupil, or can illuminate the background, leaving the cornea in comparative darkness, and depending on the interruption of the light from the background, which any opaque foreign body will cause, to reveal its location. This is the advantage that the so-called "oblique" or "focal" illumination in the dark room possesses over inspection by an ordinary diffused light.

The shifting of the point of view so as to bring the foreign body into the area of most favorable illumination is essential to any thorough search, whatever method is employed. By focal illumination foreign bodies of light color will be best seen when strongly illuminated against the black pupil as a background; while if the foreign body is dark it is better to strongly illuminate the iris behind it.

We may also get an illuminated background against which a foreign body will usually appear as a black speck by throwing the light into the eye with the ophthalmoscope mirror, held several inches in front of it, and shifting the position of the eye or the point from which it is viewed, so as to obtain the fundus reflex through the different parts of the cornea.

An excellent method of searching for the foreign body, and one that has the advantage of being available during its removal, is to look for the interruption that it causes in the reflex obtained from the corneal surface. To do this, place the patient facing the window with a large open sky space, while the surgeon takes his position so as to obtain the reflection of the sky space from the surface of the cornea, a very good position being to stand behind the patient, looking down on the cornea. The patient's eye is then turned from point to point, so that the reflection is obtained from all parts of the cornea in succession. If the window with clear sky space is not obtainable, a piece of plain white paper or card-board, strongly illuminated, and held close in front of the eye to be examined, will furnish the required reflex from the corneal surface. The essentials are that the reflex shall be bright, uniform, and large enough to enable the observer to go rapidly over the whole cornea without missing any part of it.

If, on any part of the surface, there is an irregularity, as an ulcer or a foreign body, this will cause an interruption of the reflex, and be immediately noticeable. A great help in making such irregularities prominent is the careful drying of the cornea with a little absorbent cotton, a method to the full valve of which my attention was called by our fellow-member, Dr. M. W. Zimmerman. The removal of all moisture does not impair the reflex from the sound cornea, but lays bare any irregularity or loss of substance, which, when filled with fluid, would give almost the normal corneal reflex.

Another aid to the detection of foreign bodies in the cornea is the use of a solution of fluroescin. A good solution consists of—

Fluorescin.....	1 grain.
Sodium carbonate.....	2 grains.
Distilled water.....	1 fluidrachm.

A single drop of this is placed on the suspended cornea, and after two or three minutes the excess is allowed to be washed away by the tears. It is then found that while on the uninjured cornea not the slightest effect has been produced, the corneal tissue in the neighborhood of any recent abrasion has been stained a noticeable light green. This discoloration at once directs attention to the locality of the injury, and the stained tissue furnishes a background against which any foreign body of dark color is more readily seen.

While the reception of a foreign body in the cornea may not be noticed, and during the first few hours the pain and redness resulting from its presence are apt to be quite slight, its continued presence provokes a reaction which increases in severity until it is gotten rid of. At first,

the redness will be confined to the vessels of the part of the peri-corneal zone nearest the foreign body, and its location will then often guide us to the site of lodgment. Later, it extends until the whole conjunctiva and the deeper tissues of the globe become hyperæmic, when it becomes of little diagnostic value. With the increased vascularity come increased pain and tenderness.

Self-cure, in the case of a foreign body in the cornea, takes place by suppuration of the adjoining tissue to such an extent that the softening loosens the foreign body and allows it to be rubbed off by the movements of the lids—a slow, painful process, that probably few persons are stolid enough to submit to without seeking competent aid for its removal. In a few cases, however, the inflammation subsides, the foreign body becoming surrounded with fibrous tissue that tolerates its presence, and in rare cases it is possible for a foreign body to remain in the cornea a long time without provoking any reaction. I have met with three cases in which foreign bodies were thus retained for periods varying from one to eighteen months.

Of the removal of foreign bodies from the cornea in general, little need be said. The introduction of cocaine as a local anæsthetic has enormously simplified it. There is, perhaps, some danger now of being led by the passive demeanor of the patient to indulge in unnecessary manipulation of the parts. The thorough cleansing of the actual cavity of lodgment, together with the scraping away of the bruised and lacerated tissue, is very important, but the promiscuous scraping of the neighboring surface in the attempt to catch a foreign body that is not clearly seen is always harmful, if not dangerous.

When the foreign body enters with such force as almost to penetrate the cornea, and, to a still geater extent, when it projects into the anterior chamber, its removal becomes an operation of considerable delicacy and importance, on account of the danger of the premature escape of the aqueous humor and the scratching or puncture of the anterior capsule of the lens, causing traumatic cataract.

There applied a few months since, at the Wills Eye Hospital, a young man who had received a small chip of iron in the center of the left cornea the day before. Efforts had been made to extract it with a piece of magnetized steel, and with a penknife, but had been unsuccessful; whether they had driven the fragment deeper I do not know. He applied in the morning, and Dr. Pontius, the resident surgeon, finding that the aqueous was escaping and the anterior chamber shallow, had wisely, simply instilled atropine and closed the eye with a light bandage to secure rest. When the patient returned in the afternoon the swelling of the adjoining cornea had stopped the leakage of the aqueous, and the anterior chamber was of normal depth. The chip of iron was seen projecting from the posterior surface of the cornea into the anterior chamber.

The eye was placed under the full anæsthetic action of cocaine, and a broad, gradually tapering needle introduced at a little distance from the wound, in such a manner that its point entered the anterior chamber close to the foreign body and passed back of it. This point was held against the posterior surface of the cornea, the needle being steadily pressed forward sufficiently to keep the incision full and prevent the escape of aqueous. The foreign body was then dug out with another needle and the ordinary corneal spud. This was attended with the escape of some aqueous, but, with the broad needle held flat to shield it, any injury of the lens was prevented.

In such an operation the placing and steadily maintaining in proper position of the broad needle that acts as a shield is the most difficult part. For this purpose a needle which continues to broaden and becomes blunt and rounded on its edges, so that it ceases to act as a knife and more perfectly performs its function as a plug, might be a slightly better instrument than the ordinary broad needle. In this case the steady maintenance of the shield-needle in position was materially aided by causing the point to reënter the posterior surface of the cornea, and by introducing it in such a direction that the tendency of the patient to move the globe kept it pressed against the needle rather than withdrew it.

When a foreign body composed of or containing iron remains a few days in the cornea it is apt to leave a dark-brown ring of staining when it is removed. It is often difficult to decide whether the appearance is due to this stain alone or whether some portion of the foreign body

also remains. On this account it is more satisfactory to remove the stain if this can readily be done, but any prolonged or extended scraping is not justified, for the stain is harmless and temporary.

The electro magnet is of little use in removing foreign bodies from the cornea, because they are so firmly wedged that its force is entirely insufficient to dislodge them. There is, however, a special form of foreign body for which I have resorted to the electro-cautery, namely, grains of gunpowder, which have proven, when the attempt was made to extract them in the method of ordinary foreign bodies, to be so intimately associated with the adjoining corneal tissue as to render it impracticable to extract them in the ordinary way without too much abstraction of tissue.

In the case of the patient shown this evening there were three such grains in the left cornea, remaining after others were removed without difficulty from both corneas. These deeply imbedded and diffused grains were touched with a pointed electrode, and thus destroyed with the least possible damage to the surrounding tissues. The same method was applied to some of the grains that had been at the same time imbedded in the lids, brow, and cheeks, with the very satisfactory results shown.

SYMPHYSIOTOMY, WITH THE REPORT OF AN OPERATION.[1]

By BARTON COOKE HIRST, M.D.

SYMPHYSIOTOMY has as remarkable a history as any procedure in surgery. Suggested for the first time in the surgery published by Pineau in 1598, and first performed upon a living woman in 1777, the idea may be said to be three hundred years old, while its practical application dates back more than a century.[2] From the year of the first operation until 1858 symphysiotomy was performed eighty-five times in different parts of the Continent of Europe, and once in England, with a mortality of 33 per cent. The frequency of the operation diminished after the first few years, until in 1858 it had practically died out. It was revived, however, in Italy in 1866, and in the succeeding twenty years seventy operations were performed with a mortality of 24 per cent. Italy continued to be the exclusive field of the operation until a year ago, when it was again tried in Paris by Pinard, whose interest in it was aroused by a visit of Spinelli from Italy. Ten operations have since been performed in Paris, two in Dresden, and one in Strasburg. From January 1, 1886, there have been fifty-two operations with only a single death, due to septic infection before the operation was undertaken. Twenty-three symphysiotomies have been done already this year, and the last thirty-four women have all recovered.

We owe the introduction of symphysiotomy in this country to Dr. Robert P. Harris, who, as is well known, has long been interested in the subject, and at the recent meeting of the American Gynecological Society in Brooklyn read a paper tracing the development of the operation, showing by the most laboriously collected statistics the present brilliant results achieved by it, and demonstrating, by the description of typical cases, its utility in labors otherwise insuperably obstructed by a contracted pelvis.

Ten days after Dr. Harris' paper was read, on September 30, the first operation in this country was performed by Dr. Charles Jewett, in Brooklyn. Three days later it was again performed at the Maternity Pavilion of the University Hospital in this city.

The position of symphysiotomy is now established beyond a doubt. Its modern revival I believe to be the most important advance in obstetric surgery since the general adoption of abdominal section for the treatment of early extra-uterine pregnancy. It is applicable in contracted pelvis with a conjugate over 67 mm., and, therefore, should be the method employed in almost all cases of the kind in this country, for a greater contraction of the pelvis is rarely seen among us. It should, moreover, almost entirely displace the Cæsarean section for a relative indication. It is a much simpler, an easier, and a safer operation. This is also the opinion of Leopold, who cannot be accused of prejudice against Cæsarean section, with his brilliant record in that field.

There is and will be for some time, perhaps, an objection to the operation from those who have no experience with it, on the ground that sufficient space cannot

[1] Read at the Philadelphia County Medical Society, October 12, 1892.

[2] R. P. Harris: Amer. Syst. of Obstet. vol. ii.

be thus gained. In answer to this objection is the fact that the pubic bones may gape 7 cm. after their separation, and the statement of Morisani, that the conjugate is thereby increased from 1.3 to 1.5 cm. But an absolutely conclusive answer is furnished by the subjoined clinical records of some typical cases.

Leopold's First Case[1].—A dwarf, 135 cm. tall, with the following pelvic measurements: Sp. il., 22 cm.; cr. il., 24 cm.; tr. 28 cm.; conj. ex., 17½ cm.; conj. diag., 8¾ cm.; conj. vera, 6¾ cm. She had been delivered thrice previously—twice of dead children, once by the induction of premature labor. After a labor of seven hours and twenty minutes, ushered in by rupture of the membranes, symphysiotomy was performed with the head above the brim. In ten minutes the child was extracted with forceps. The head was of normal size (transverse, 9¾, 8¼; circ., 34).

Leopold's Second Case.[2]—A woman, delivered once before by craniotomy. The pelvic measurements were as follows; Sp. il., 22; cr. il., 25; tr., 30½; conj. ext., 16; conj. diag., 8½; conj. vera, 6¾. Labor began in the evening; membranes ruptured seven hours later; operation three hours later with head above the brim. Extraction of the child in ten minutes with forceps. The head had a circumference of 35¼ cm.

Porak's Case.[3]—A primipara with rhachitic pelvis, conjugata diagonalis being 9.6 cm., and pelvis presenting some asymmetry, very likely from scoliosis. Labor began on June 10. About twelve hours later the membranes ruptured, and from eight to ten hours afterward the os was completely dilated. The head rested above the brim of the pelvis. Forceps was applied, but all efforts to engage and extract the head failed. The symphysis was opened, and the head then extracted "with the greatest ease" by forceps. Recovery.

Freund's Case.[4]—A woman, in labor six days; water drained off for two days. After opening the symphysis the head was delivered in fifteen minutes without instruments. There were two previous deliveries, one of a dead and one of a living child. The pelvic measurements were: Sp. il., 24½; cr. il., 27; tr., 31; conj. ext., 18½; conj. diag., 10 cm.; conj. vera, 8¼. The child's head after birth was found unusually large and hard. B. T., 10 cm.; B. P., 11 cm.; F. O., 12 cm.; M. O., 14 cm.; S. B., 10 cm. Circumference, O. F., 37 cm. Recovery.

Jewett's Case.[1]—The first symphysiotomy in America, performed by Dr. Charles Jewett, of Brooklyn, September 30, 1892. Woman a native American, primipara, fell in labor September 30, 1 o'clock, A.M.; at 10 A.M. the occiput appeared at the vulva, but was held fast by an approximation of the ischiac tuberosities, reducing the bisischiac diameter to three inches. Nine hours later Dr. Jewett first saw the patient. The forceps had been vigorously used in vain. Symphysiotomy was performed two and one-half hours later, or eleven and one-half hours after the impaction of the head at the outlet. Delivered was effected by supra-pubic pressure, and by shelling the head out with the fingers in the rectum. The woman is now in good condition, but, unfortunately, the child died twenty-four hours after birth, from the compression to which the skull had been subjected during its long impaction in the pelvis.

The University Maternity Case.—A German woman, aged nineteen, pregnant for the first time, was admitted to the University Maternity, September 24. The examination by the resident physician and the students showed the child to be presenting by the head, the back to the right. The pelvic measurements were: Sp. il., 25 cm.; cr. il., 27 cm.; tr., 30½ cm.; conj. ex., 18 cm.

The internal examination made by myself just before operation, showed the conjugata diagonalis to be 9½ cm.; conj. vera, 7¾ cm. The girl fell in labor Saturday morning, October 1. The pains recurring all day; on Sunday became very vigorous. On Monday morning, when my attention was first called to the case, the contraction-ring was high, the uterus stood almost straight out from the body, and the child's head was movable above the superior strait. The membranes were unruptured. By no justifiable degree of force could the head be made to enter the pelvis. The fetal heart-sounds were good. It was evidently, therefore, a choice of

[1] *Centralbl. f. Gyn.*, 1892, No. 30.
[2] *Centralbl. f. Gyn.*, 1892, No. 30.
[3] *Annales de Gynécologie*, September, 1892.
[4] Müllerheim, "Uber die Symphysiotomie," *Centralbl. f. Gyn.*, 1892, No. 30.

[1] Personal communication.

Cæsarean section, craniotomy, or symphysiotomy. The last was done with the assistance of Dr. R. C. Norris and the valuable advice of Dr. R. P. Harris, who kindly consented to be present. The child was delivered with forceps in one hour and four minutes from the time the operation was begun. I purposely took my time, for the os was only the size of a dollar, and was very rigid, so that a more rapid extraction would have seriously injured the cervix. Head measurements: B. T., 7½; B. P. 9; F. O., 12; M. O., 13½; circ., 34. Mother and child are well.

The technique of symphysiotomy is simple and easy. After thoroughly cleansing the field of operation and disinfecting the vagina as well, a short vertical incision is made on the abdominal wall, reaching to about three-quarters of an inch above the symphysis. The attachments of the recti muscles are severed just sufficiently to admit one finger. The forefinger of the left hand is passed under the symphysis, and upon this as a guide the curved knife of Galbiati is inserted until its beak projects under and in front of the symphysis. The joint is then cut upward and outward. To avoid injury to the urethra, a metal catheter is inserted and pressed by an assistant downward and a little to the right, while the knife is placed a little to the left; but with Galbiati's knife I should think that there is little likelihood of cutting the urethra or the plexus of veins in its neighborhood. I at first thought that an ordinary probe-pointed, curved bistoury would serve my purpose well enough, but I quickly laid it aside, and was glad to avail myself of Galbiati's knife, an illustration of which is appended, which I happened to possess —at the time one of the three, I believe, in the country.

As soon as the joint has been severed, the wound should be covered with iodoform gauze, and then the child extracted with forceps, or allowed to be delivered naturally, as seems best in the individual case. I should, I think, almost always prefer the forceps. It is well to have the trochanters supported by assistants during the passage of the child through the pelvis, so that the sacro iliac joints shall not be injured.

As soon as the delivery is completed the wound is sewed up, the lowest stitch, if desired, passing through the top of the symphysis. How the whole symphysis can be stitched up, as Leopold claims to have done, I do not understand. After closing the wound and dressing it, rubber adhesive strips are placed around the hips and the lower abdomen, and a tight binder applied. The symphysis unites surprisingly soon, and three weeks after the operation the patient can walk as firmly and as well as ever.

There is only one disturbing thought in connection with the introduction in this country of an operation destined to do so much good. The charge of superficiality lies with some justice against us. We are too ready to reach out toward the top without a sufficient basis of solid preparation, and I fear that symphysiotomy may be undertaken by many who cannot correctly measure a pelvis, and who have not the experience to decide whether a head can pass through the pelvis in which it is about to enter or in which it is engaged. There is consolation, however, in the reflection that if symphysiotomy should be done needlessly, the results are not likely to be so disastrous as in the case of Cæsarean section which, to my knowledge, was done several times unnecessarily during the excitement produced among medical men by the improved results of the Sänger operation.

Society Notes.

AMERICAN ELECTRO THERAPEUTIC ASSOCIATION.

New York, October 4, 1892.

EXECUTIVE SESSION.

THE meeting was called to order at 10.30 A.M., by the President, Dr. W. J. MORTON in the Chair. In the absence of the Secretary, Dr. HUTCHINSON acted as Secretary *pro tem.* The first business was election of new members.

The following names having been recommended by the Executive Council for membership, were balloted for and declared elected Fellows of the Association.

Dr. Floyd S. Crego, Detroit, Michigan; Dr. H. H. Hahn, Youngstown, Ohio; Dr. A. G. Henry, Cortland, New York; Dr. Thos. W. Poole Lindsay, Ontario, Canada; Dr. W. J. Herdman, Ann Arbor, Michigan; Dr. D. S. Campbell, Detroit,

Michigan; Dr. Emil Heuel, 352 Willis avenue, New York; Dr. Wm. Davis, Omaha, Nebraska; Dr. J. T. Harvey, Boston, Massachusetts; Dr. C. W. Martin, Topeka, Nebraska; Dr. E. B. Sangree, 744 South Fifteenth street, Philadelphia; Dr. G. M. Hammond, 58 West Forty-fifth street, New York; Dr. Robert L. Watkins, 320 West One Hundred and Forty-fifth street, New York; Dr. George T. Hulbert, St. Louis, Missouri; Dr. Lucy M. Hall Brown, 134 Montague street, Brooklyn; Dr. Charles R. Dickson, 161 Victoria street, Toronto, Canada; Dr. Howard Smith, Surgeon United States Navy, retired; Dr. F. Schavoir, 8 Atlantic street, Stamford, Connecticut; Dr. Ernest Wende, 174 Franklin street, Buffalo, New York; Dr. O. S. Phelps, 143 West One Hundred and Thirty-first street, New York; Dr. S. T. Anderson, Bloomington, Illinois; Dr. Spencer M. Free, Dubois, Pennsylvania; Dr. F. Semeleder, Mexico; Dr. J. Mount Bleyer, 118 East Sixteenth street, New York; Dr. Willis E. Ford, 266 Genesee street, Utica, New York; Dr. A. E. Percy, Providence, Rhode Island; Dr. D. J. Neylan, Bristol, Rhode Island; Dr. F. H. Wallace, Boston, Massachusetts; Dr. W. T. Bishop, Harrisburg, Pennsylvania; Dr. Holford Walker, 56 Isabella street, Toronto, Canada.

Likewise as Honorary Member.—Dr. W. Bruce Clarke, M.A., M.B., F.R.C.S., 46 Harley street, Cavendish Square, West London, England.

The Executive Session then closed, and the Association went into General Session. President W. J. Morton delivered his address, entitled "Electricity and Medical Art and Science," which was received with applause.

Reports of committees were then called for. Report of Committee on Standard Coils. No report having been received from the entire committee, owing to lack of time, the President called for individual members of the committee.

Dr. Goelet remarked that the difficulties in the way of proper coils were very great, owing, for one point to the great expense of winding coils useful for gynecology, neurology, etc. Two firms have done well in giving assistance, the Galvano Faradic Manufacturing Company, of New York, and Chloride of Silver Battery Company.

Dr. Hutchinson reported progress in this line, speaking of what has been done.

Dr. Morton remarked that, in his opinion, it will be better to have the services of a practical electrical engineer added to the committee, and suggested the name of Mr. Kennelly, Chief Electrician of the Edison Laboratory.

Dr. Massey remarked that his studies had been in the line of the primary current—in the way of contracting of muscle, that such current will contract a soft myoma to a certainty—that different coils produce different results.

Dr. Morton reporting as an individual member of the committee, pointed out the difficulties the committee had to contend with if the mere question of frequency of interruptions alone were to be considered, since variations per second from about 20 to about 5,000 produced muscular contractions and effects upon sensory nerves. The electrical engineers had found the subject of transformers a very abstract one, and he thought another year would be none too much time for the committee to devote to the subject.

It was resolved that Mr. Kennelly be added to the committee.

Report of Committee on Arrangements: Dr. Goelet of the committee, expressed his regrets that Dr. Newman was ill, and therefore unable to be present to explain the program. Read an invitation from Metropolitan Telephone Co. to visit their rooms, and announced that the Electric Club had tendered the privileges of the club house for two weeks to members of the Association, and also had invited the members to a social reunion at the Club this evening.

The reading of papers was then begun.

Tuesday, October 4, 1892.

Afternoon session.—Meeting called to order at 3 P.M. The President, Dr. W. J. Morton, in the Chair. The Secretary being absent, Dr. Charles R. Dickson, of Toronto, Canada, at the request of the President, acted as Secretary *pro tem.* for the balance of the sessions.

Dr. Hutchinson exhibited his singing rheotome constructed of a ribbon of phosphor bronze, the pitch of which can be readily raised or lowered. All pain takes the same pitch, but resistance has to be largely taken into consideration. In sciatica he used C major and found it best.

MR. CARTY: The quality of the material of construction enters very largely into the effect to be produced irrespective of the speed of vibration.

DR. GOELET agrees with Mr. Carty, and thinks there is a difference due to the quality of the iron of the coil.

DR. KELLOGG asked Mr. Carty: "Do the vibrations of the rheotome correspond with the movements of the current?" but Mr. Carty replied "No." Dr. Kellogg said that by making his instruments revolve very rapidly he can measure very rapid alternations.

DR. GOELET thought Dr. Hutchinson did right to call attention to the difference in the resistances encountered in different classes of medical work. He did not think the electrical engineers exactly understand our position. They have to deal with definite known resistances which are comparatively low, while the resistances encountered in medical work vary greatly, and are usually enormous by comparison. Their estimate of the induced current (or what we know as the faradic) is based upon its character while traversing a wire with little or no resistance; therefore, they regard it as an alternating current. The make and break currents are equally appreciable through a low resistance, such as a wire, but when applied to the resistances of the human body, the make current is so feeble that as it possesses so little electro-motive force that it is inappreciable, and only the break current, which is computed to be thirteen times stronger, exerts an appreciable effect. Then, too, he does not believe they appreciate fully the stress we lay upon the variation of the tension and volume of the different currents derived from coils of different size and length of wire. To do so, it would be necessary to understand the different conditions we have to deal with. The current of tension or higher electro-motive force is used for the relief of pain, and the current of volume, or lower electro-motive force, for muscle stimulation. These qualities of the two currents are, of course, more manifest in gynecological work where both poles are applied to a moist mucous surface which offers less resistance to the penetration of the current than the outside or skin surface.

DR. NUNN has been working along the same lines and thinks the ribbon vibrator a grand discovery. He thinks the plan is an internal percussion of the nerve interfering with its vibrations, besides this we get the effect of the current between the percussions.

MR. CARTY:-Take the terminals of your apparatus; attach small metal plates; bring them together, and they will attract each other, and will produce the percussion alluded to. He thinks that if this is done with plates, a tone is given out, and this would furnish a testing instrument.

DR. HERDMAN.—May not all this be explained on purely mechanical grounds?

DR. DICKSON.—Electricity is only *one* of the forms of motion in matter; sound is another, and sound is made use of in treating some of the diseases of the ear by means of the phonograph, its action being mechanical.

DR. MORTON, replying to Dr. Herdman as to vibratory treatment, alluded to recent papers in the *Electrical Engineer* and *Progrès Médical*.

DR. CAMPBELL asked if complete anæsthesia could be produced.

DR. HUTCHINSON.—The human body is varying all the time. We have also to deal with vital force, of which we know absolutely nothing. We may not get the same number of vibrations at one end of the machine—the rheotome—that we get at the other, but if we relieve pain we should be satisfied. Our duty to our patients is the paramount one. As to the different resistances of some, they differ much, and they are impossible of measurement; they vary from second to seconds. A certain effect is produced, but how, he does not know and does not care. Had we to deal with inert matter like the physicists, we could be more exact, but we deal with life. He eliminated the element of "sound" cure. Anæsthesia, local only, is produced with the utmost ease, from one to one and a half inches around the electrode as well as under it, but no further.

The President announced that as there was so much to take up the time of the Association, he would not hold his proposed clinic, but that the whole afternoon would be devoted to papers and discussions.

The meeting then adjourned.

Afternoon session.—Called to order by the President in the Chair.

DR. GOELET read the announcements of the Committee of Arrangements. A re-

ception by the resident members of the City of New York to the members of the Association, their ladies and invited guests, would be held this evening in the Academy.

A letter from Dr. Schavoir was read, inviting the members and their ladies to visit his Sanitarium at Stamford. Come on Friday, at 11 A.M.

Wednesday, October 5, 1892.

Evening session.—Executive session for the election of Officers.

Meeting called to order at 9 P.M. President Morton in the Chair.

The President, in accordance with the suggestion made by Dr. Herdman in the morning, reported and submitted the following names for committees, all of whom were elected:

Committee on Standard Static Machine: Dr. J. H. Kellogg, Dr. M. A. Cleaves, Dr. G. B. Massey.

Committee on Standard Constant Current Generators and Controllers: Dr. W. J. Herdman, Dr. F. Peterson, Dr. R. Newman.

Committee on Standard Electrodes: Dr. A. D. Rockwell, Dr. R. J. Nunn, Dr. C. R. Dickson.

To the Committee on Standard Coils, at present consisting of Dr. W. J. Morton, Dr. A. H. Goelet, Dr. G. B. Massey, Dr. W. F. Hutchinson, he would add Mr. A. E. Kennelly.

The Committee on Standard Meters as at present, consisting of Dr. W. Adams, Dr. H. E. Hayd, Dr. W. F. Robinson.

The members above-mentioned were then elected to serve on their respective committees for one year, and report at the next annual meeting.

On motion of Dr. Herdman, seconded by Dr. Nunn, it was

Resolved, That Dr. Morton be Chairman of Committee on Static Machines.

The following officers were then elected for next annual meeting:

President, Dr. August M. H. Goelet, of New York; First Vice-President, Dr. Wm. F. Hutchinson, of Providence, R. I.; Second Vice-President, Dr. W. J. Herdman, of Ann Arbor, Michigan; Secretary, Dr. W. A. Cleaves, of New York; Treasurer, Dr. R. J. Nunn, of Savannah, Ga.; Executive Committee: Dr. W. J. Morton, of New York; Dr. G. Betton Massey, of Philadelphia, Pa.; Dr. Robert Newman, of New York; Dr. Charles R. Dickson, of Toronto, Canada; Dr. J. H. Kellogg, of Battle Creek, Michigan.

On motion of Dr. Nunn, seconded by Dr. Bishop,

Resolved, That the Secretary report funds in hand to the Treasurer.

On motion of Dr. Hutchinson, seconded by Dr. it was

Resolved, That this Association meet in Philadelphia on the Tuesday following the meeting of the Pan-American Medical Congress, namely, 12th of September, 1893.

On motion of Dr. Hutchinson, seconded by Dr. Nunn,

Resolved, That the Secretary of the American Electro-Therapeutic Association be directed to communicate with the Secretary-General of the Pan-American Medical Congress, Dr. C. A. L. Reed, 311 Elm street, Cincinnati, Ohio, requesting him to add to his circular of information the fact that the date of the meeting of this Society has been fixed for the week succeeding the meeting of the Congress in Washington.

On motion of Dr. Hutchinson,

Resolved, That Committee of Arrangements for the Philadelphia meeting consist of Dr. G. B. Massey, Dr. M. J. Grier, and Dr. H. R. Bigelow.

Dr. Morton gave notice of motion to present an amendment to Article III of Constitution, to read thus: "The members of this Association shall consist of Ordinary Fellows, Honorary Fellows, and Corresponding Fellows, who shall be either practitioners of medicine in good standing or electrical experts."

The Executive Session then adjourned to meet again Thursday at 10 A.M., and the visiting members, their ladies and invited guests enjoyed the hospitality of the members of the Association resident in the city of New York in the form of a lecture, private exhibition, reception, and collation at the Academy. A most interesting and instructive lecture on the phonograph and microphonograph with illustrations and demonstrations, was given by Dr. J. Mount Bleyer and Lieutenant Gianni Bettini. After the lecture the guests were treated to a number of very beautiful, and also several most amusing, selections on these two instruments of precision, while the medical portion of the audience was afforded on opportunity of listening to heart and chest sounds. When all these and the mag-

nificent display of electrical instruments in an adjoining room had received ample attention, the guests descended to the handsome parlors of the Academy, where, to the strains of choice music furnished by a detachment of Prof. F. Eben's Seventy-first Regiment Band, an elegant banquet was served, during the course of which the retiring President, Dr. W. J. Morton, vainly endeavored to embarrass celebrities present by calling on them for impromptu responses to toasts in a most informal manner, and when least expected. The entertainment came to a close at a late hour. The unanimous expression being that a most enjoyable evening, both scientifically and socially, had been spent.

Thursday, October 6, 1892.

Vice-President Augustin H. Goelet, M. D., in the Chair, called Association to order at 10 A.M.

The Association went into Executive Session.

On motion of Dr. Hutchinson, seconded by Dr. Massey, it was

Resolved, That the Secretary be empowered to employ an assistant at the next annual meeting.

On motion of Dr. Bishop, seconded by Dr. Nunn, it was

Resolved, That the Executive Committee be instructed to publish the proceedings of the preliminary and first annual meeting, together with the proceedings of this present meeting, all papers, proceedings, etc., to be included ; a perfect history is intended to be published in book form, each member to receive a copy.

On motion of Dr. Massey, seconded by Dr. Nunn, it was

Resolved, That a vote of thanks be tendered the resident members of this Association for courtesies extended.

On motion of Dr. Massey, seconded by Dr. von Raitz, it was

Resolved, That a vote of thanks be tendered the Council of the New York Academy of Medicine for the use of its building ; also to the New York Electrical Club, Mr. Thomas A. Edison, and all others who have extended courtesies.

On motion of Dr. Massey, seconded by Dr. Nunn, it was

Resolved, That a vote of thanks be tendered those who, being unable to attend, have sent valuable papers to be read at these meetings ; also, the electrical experts, who, by their attendance, papers, and discussions, have contributed so largely to make the meetings such a grand success, and that the Secretary be instructed to convey to each the thanks of the Association.

The Executive Meeting adjourned, and the Association went into General Session at 10.45 A.M.

Thursday, October 6, 1892.

Vice-President A. H. Goelet, M.D., in the Chair. Association went into general session at 10.45 A.M.

At the conclusion of the reading, on motion of Dr. Hutchinson, it was

Resolved, That a committee be appointed to investigate the statistics submitted by Dr. Newman, and report upon their authenticity and completeness.

On motion of Dr. Nunn, it was

Resolved, That the discussion on the paper be deferred till the evening session —it to be the first order of business.

As there were other papers to come before the Association before its labors could be concluded, it was

Resolved, That the Association assemble at 8 P.M., in regular session.

The Association then adjourned to accept of the kind invitation of Mr. Thomas A. Edison, to visit his laboratory at Llewellen, N. J.

After a trip across the ferry from West 23d street, at 1.25 P.M., and a short run by rail, the party, consisting of members and their ladies, arrived at the laboratory. Mr. Smiles, of the Edison Manufacturing Co., kindly acting the part of guide throughout the trip. In the absence of Mr. Edison, his guests were received by Mr. A. E. Kennelly, chief electrician of the Edison laboratory, and, after being given a chance to admire the treasures of the fine library and museum, a visit was paid to the lecture room up-stairs, where a large number of phonographs were in position, and ample opportunity afforded to listen to grand orchestral effects, solo work, dramatic representations, comic recitations, etc. The autophones of several of the members were recorded, and when all had fully appreciated the wonders of this marvelous invention, the party was divided up in sections of ten, each being put under the care of one of the staff, made the tour of the store-rooms, testing-rooms, work-shops, chemical rooms, phonograph construction rooms, and, in fact, the whole premises. The

officials were uniformly courteous, and, in best nature imaginable, answered to the best of their ability the innumerable questions showered upon them by the visitors, some of whom found it a hard matter to tear themselves away from the magnificent specimens of instruments of precision, and narrowly missed losing their train thereby. On return to the starting point, a delicious lunch was in waiting, which was much appreciated, as the appetites of all were whetted by the long walk through the different buildings and the fresh Jersey air.

The return trip was made by 6 P.M., and the unanimous verdict was that a most delightful and instructive afternoon had been spent. The kindness of Mr. Edison was much appreciated. Of course, there were some who went out of pure curiosity, and it was fully gratified in a most pleasant manner; then, again, there were those who made the trip, keeping in view the opportunity of adding to their stock of knowledge of a practical as well as theoretical nature, and many of these were heard to remark, on the return trip, that they had seen much to set them thinking, and much that would help them to use electricity in a more intelligent manner.

Thursday, October 6th, 1892.

Evening session. President W. J. Morton, M.D., in the chair.

The meeting was called to order at 8 P. M.

The first business was the discussion on Dr. Newman's paper.

The President then announced the names of the Committee to Investigate Dr. Newman's Statistics:

Dr. A. H. Goelet, Chairman; Dr. W. J. Herdman, Dr. W. J. Morton, these three to appoint two surgeons of prominence to act in concert with them.

There being no further papers to hand, a letter was read from Dr. George J. Engleman, dated from Paris, expressing regrets at his absence.

The retiring President, Dr. W. J. Morton, expressed his thanks to the Association for their assistance in making the duties of the Chair so light and agreeable, and facilitating the business, and introduced the President-elect, Dr. Augustin H. Goelet, who, taking the Chair, made a few felicitous remarks most appropriate to the occasion, and complimented Dr. Morton on the manner in which he had conducted the meeting.

On motion of Dr. Nunn, seconded by Dr. von Raitz, it was

Resolved, That a vote of thanks be tendered Dr. Morton for the very able manner in which he had fulfilled the duties of the Chair.

The Association then adjourned to meet in Philadelphia, Pa., on Tuesday, 12th of September, 1893.

On Friday, October 7, a small party of members, their wives and friends assembled at the New Haven depot at 11 A. M., to accept the kind invitation of Dr. Schavoir to visit his Sanitarium at Stamford, Conn. After an hour's ride by rail the picturesque village was reached, and Dr. Schavoir was on hand with several conveyances for his guests. A short and very pretty drive soon landed the party at the Sanitarium, the view from which was much admired. The doctor's electric bath and other electric appliances were minutely inspected, and a stroll around the spacious and beautiful grounds convinced all that a more suitable place for a Sanitarium would be hard to find. The many pets in the form of horses, cattle, fowls, pigeons, parrot, marmoset, and squirrels came in for their share of attention, then an adjournment was made to the house where a most delicious lunch was served and full justice done to it. After lunch the rooms were inspected with their convenience and fitness, to say nothing of the cosiness. Next in order came a drive around the vicinity of Stamford, which is a well and favorably known resort, so that the pleasure of this outing may be imagined. A most delightful afternoon having been spent, the members of the party bade good bye to Dr Schavoir and his amiable wife, who presided most gracefully. The return to New York was made on a late afternoon train, and the festivities in connection with the Second Annual Meeting of the American Electro-Therapeutic Society were at a close.

R. B. LEACH claims that arsenic is efficient as a vaccine against cholera, basing his theory on the alleged similarity between the symptoms of cholera and those of arsenical poisoning. This is a very flimsy foundation, and as long as it is unsupported by facts, does not demand serious consideration.

The Polyclinic.

MEDICO-CHIRURGICAL COLLEGE.

Surgical Clinic, Prof. Pancoast.

HERNIA AND HYDROCELE.

A MAN of fifty-five years presented himself with a double inguinal hernia. He was using a badly-fitting truss. The protrusion on the right side was somewhat larger than that on the left. After explaining that the protrusion in hernia is characterized by its greater breadth at the base than at the apex, while in hydrocele the converse holds true, that is, the protuberance is large at the bottom and narrow at the neck, the lecturer punctured the protuberance on the left of the median line with a trocar, resulting in the evacuation of fluid through it to the amount of about a pint. The much misunderstood right method of pushing the protrusion back into place he explained, as consisting of pulling it downward and next in pushing it upward and into place. In regard to trusses, he urged the importance of physicians seeing to the ordering of the truss themselves for their patient, as ill-fitting trusses are in some measure to blame for cases of strangulated hernia.

SCALP-WOUND.

The second case was that of a man, about fifty years old, with a cut on the left side of the head, just above the temporal bone, inflicted some six days ago. It was dressed at an hospital, but as it felt worse, he came to the Medico-Chirurgical. Prof. Pancoast pronounced the case as one of "Puffiness of the Scalp," arising from the neglected condition of the wound, resulting from the effusion of venous blood into the cellular connective tissue of the scalp. He pierced the scalp at a point well down on the forehead, pushing the instrument clear up to the cut in the head, to let out the extravasated blood.

The patient said the piercing did not hurt. Dr. Pancoast said the patient's arrival last evening was none too timely at the hospital, as he then presented the appearance of an erysipelatous flushed face. But that danger was now past. The patient, however, had been in that danger, and in that of losing his scalp. A compress was applied to check the hemorrhage. Strands of silk were used to keep open the puncture made low down on the forehead, in order to drain off any fluid that would collect.

"THE ANTIPHLOGISTIC TOUCH."

The next case was of a young woman with a swelling below the left ear, and involving apparently the jaw and part of the chin. It was a bad case for oral surgery. Dr. Pancoast made rapidly a number of punctures in the swelling, at which the patient evinced considerable pain. He advised the students in cases of operations that would give pain, not to deceive their patients, but to inform them beforehand of the fact.

Gynecological Clinic, Prof. Ashton.

URETHROCELE.

Case of urethrocele in a woman of forty-one years, the mother of four children. He dilated on the necessity of having the bands, instruments, etc., aseptic; corrosive sublimate making a good lotion. He explained the method of ascertaining whether the obstruction were in the upper, middle, or lower part of the urethra. The present case was one of an obstruction like a wart or button in the vulva. Unless the urine had unobstructed passage no permanent cure of the urethrocele could be effected. Should the tumor be removed? Not advisable in this case when a sure method of permitting escape of the urine presents itself, such as making an artificial channel a urethro-vaginal fistula.

When a patient is in fair way of cure, do not remove the obstruction, as that may bring unexpected complications in its train; leave well enough alone; better not tinker. If the operator knows thoroughly the nature and extent of an obstruction, and the sequel to the removal of same, then he should employ the line of action offering the best indications of permanent cure.

A SOURCE OF SEPTIC INFECTION.

In a case where abdominal section had been performed, and the patient (a woman) was progressing favorably, she had touched the locality with her hand. With aged persons, etc., it was usual to strap the patients' hands. In this case the patient had been trusted, and will have only herself to blame if dangerous complications

interfere with the previous fair chance of recovery. In making a new dressing for the part, he stated that he used peroxide of hydrogen for dissolving the pus, and for cleaning the surface of the skin, followed by a wash with corrosive sublimate, and next by the layers of cotton.

CHILDREN'S CLINIC, DR. HOLLOPETER.

APHTHÆ.

A fine case in a girl of about four years. Treatment: Wash with boric acid or bicarbonate of soda after each meal. Touch points of eruption with nitrate of silver.

MEASLES.

To the class was then exhibited a beautiful case of eruption of the rash of measles on a child of about fifteen months of age; the trunk, from the abdomen upward, being completely covered. The arms exhibited the large crescent-shaped splotches with white spaces intervening, while the lower extremities were only slightly marked. The said measles was of microbic origin, and in that no real desquamation occurs. He dwelt upon the absolute necessity of caution in the diagnosis, in differentiating the symptoms from the somewhat similar ones in scarlet fever. Of two essential points, one was the fall of temperature after the rash has appeared. Four days prior to the eruption, temperature ranges from 101° to 103°; but 105° is a high temperature, and if it remains at that figure after appearance of the rash you may look for congestion. Treatment for the usual manifestations of measles is: The use of the tepid (warm) bath; temperature of room, 65° to 70°; the room darkened to protect the eyes; anointment from head to foot with cacao butter to ease the itching.

℞.—Acetanilid ..... gr. xij.
Hydrargyri cum cretâ ..... gr. iij.
Sacchari ..... q. s.

To carry off per rectum the mucus the patient is unable to expectorate by the mouth. If bronchial catarrh sets in, administer:

℞.—Potassii citratis ..... ʒj.
Succi limonis,
Tr. opii camphorat.,
Syrupi ipecac.,
Syrupi tolutan ..... āā ʒiv.
M.—S. fʒj., as needed.

Measles, uncomplicated with other symptoms, is not dangerous, but after the recovery the cure cannot be regarded as permanent, in the sense of preventing sequelæ, such as bronchial pneumonia, etc., even pneumonia itself; the general health is vitiated. Something also must be attributed to bad hygienic environment, as narrow alleys devoid of good air and of sunlight.

OPERATION FOR PERITYPHLITIS.—The *Centralblatt für Chirurgie* reports cases (resulting from operations in perforation of the vermiform process) nearly all presenting a series of like phenomena. The attack begins suddenly with severe pains about the navel; then more and more in the locality of the cæcum (cöcalgegend) develope pains and retching. These symptoms lull, and then there is noticeable a tumor circumscribed in the right iliac fossa (Darmbeingrube) until, and most suddenly, fever sets in, accompanied by new pains, enlargement of the tumor, and complete secondary aggravation of the symptoms, which in all cases is conditioned by the corruption, whose existence can be proven by this secondary enhancement of the symptoms, by œdema of the abdominal covering, as well as diagnosed by the examination of the rectum or of the vagina (or by a probe puncture) by the operation, or by the further course of the disease; *e. g.*, eruption of the abscess in the rectum. Among the cases operated upon were many youthful persons. In two cases the opening of the peritoneal cavity was suspended because the locality of the pus was not accessible.

In no case has the operation caused any detriment. In many severe cases the patients were beyond rescue. Of ten early operations for circumscribed peritonitis, three resulted fatally from sepsis, one collapsed, and six were cured; and of four operations for ordinary abscess all were cured. Whilst Dr. Graser admits the possibility of cure without operation through the capacity of reabsoption in small pus localities, yet he holds the operation as indicated when a rapid aggravation of the general condition, secondary rise of all the symptoms, with increase of the tumor manifest themselves, or when through a sure diagnosis, without to bring in new dangers, the course of the disease can be shortened.

The Times and Register

A Weekly Journal of Medicine and Surgery.

WM. F. WAUGH, A.M., M.D., Managing Editor.

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WHY PHYSICIANS SHOULD SPECIFY.

THE *Medical Age* speaks as follows: "There are many reasons why the doctor should specify upon his orders and prescriptions the name of the manufacturer whose product he favors, but the following extract from a letter to a prominent manufacturer furnishes an additional one:

"'We would like to handle your laboratory products and surgical appliances with our trade, but the margin you afford us is not sufficient, so every time your make is asked for we work off something else that affords us a better profit, if we can. This often occurs. If you can either allow us a better price, or charge the doctor more, we should like to buy from you; otherwise we must continue hereafter as we have done in the past.'

"The physician and the retailer should appreciate the fact that the manufacturer is being continually pressed either to establish a higher price to the doctor, which will afford the jobber an extravagant margin, or to so cut down the selling prices to the jobber as to compel the manufacturer to cheapen the quality of his product in order to enable him to do business at any profit whatever. The doctor can remedy this to a great extent by insisting that his orders and prescriptions be filled as specified, and accept no substitution."

The wrong of substitution is one of several that are driving the medical profession into dispensing. Some years ago we published an article by Dr. J. P. Russell, showing that the wide variation in the strength of fluid extracts rendered it impossible for the physician to prescribe them with safety, unless he specified the manufacturer. If this be so concerning articles preconized by the U. S. Pharmacopœia, what must be the case with the non-officinal preparations that go to make up so large a share of the physician's prescriptions? Allowing that he desires to give a drug in dose sufficient to produce a desired effect, no less and no more, how can it possibly be done with a drug whose strength varies from ten to one? Preposterous! And yet that was the difference Dr. Russell found between the best and the worst of the extracts he analyzed. It is this, rather than the "counter prescribing," renewing prescriptions, advocating patents, etc., that is driving the doctor away from the retail pharmacist. These things are external; they concern the pocket only; and no true physician cares greatly for that. But insecurity in the agents employed in treatment strikes at the vitals of the profession. If the question comes squarely before the public, as to whether it is to be doctor or druggist who treats the sick, the former has little to fear. But if the competitor for practice has the power to nullify the doctor's efforts, by substituting inferior articles for those prescribed, there must be an end to the struggle, and that right quickly. The doctor *must* specify; and if substitution be practised, he must keep his own drugs; buying direct from the manufacturer he prefers. Thanks to the "normal liquids," triturates, pills and dosimetric granules, the actual pharmaceutical labor is reduced to a minimum; while the elegant preparations of tonic compounds cannot be equaled by any but the most accomplished retail pharmacist.

Annotation.

GOLDEN RULES OF SURGICAL PRACTICE.

OUR readers will recollect the "Golden Rules for Surgical Practice" that appeared in the pages of this journal. They were published anonymously at first, and in that form were republished in this journal. We see that in England they have been so well appreciated that we now have at hand the third edition. To this we are pleased to see that the author has prefixed his name—Mr. E. Hurry Fenwick. He states that the former editions were published anonymously "because the letter press was neither original, commercial, nor polemic." The name of the author is now given because criticism has rendered it necessary that he should "take the responsibility of the shortcomings." Mr. Fenwick will not find this a heavy burden. He has prepared an excellent little digest of surgical hints, and while there are few things in it that the well informed physician does not know, there are very many who will find among these "Golden Rules" some ideas that are new to them. The booklet is printed by John Wright & Co., Bristol, England, and the price is one shilling.

Letter to the Editor.

HOW TO GIVE MERCURY IN SYPHILIS.

I AM in possession of your very highly commendable "Outline of Treatment with Dosimetric Granules." I desire, however, to have a little light on one or two points. As an example: In different forms of syphilis, say calomel, "for first stage and early secondary." You say in the dose department, gr. $\frac{1}{12}$, one every half hour when a quick impression on system is desired. I do not quite understand how often it is best to give in the above-named case.

2. How often is it best to give one of those $\frac{1}{12}$ gr. granules in case of impending syphilitic paralysis?

3. How often is it best to give one granule, $\frac{1}{12}$ grain, in case of syphilitic constipation?

4. How often is it best to give one of those granules, $\frac{1}{12}$ gr., for syphilitic headache?

5. How often to give one of those granules, $\frac{1}{12}$ gr., in case of iritis in syphilitic form?

[1. Give one granule every half to two hours until evidences of the approach of salivation are manifested; then lessen the dose a little, so as to keep just below the point of salivation, but continue the action of the mercury without ever letting the effect cease.

2. In impending paralysis, get your patient under the mercurial influence as quickly as possible; by inunctions, hypodermics and fumigations, as well as the rapid administration by the stomach.

3. In constipation of syphilitics, I would prefer to give mercurial pill, 15 to 25 grains, daily.

4. For syphilitic headache, give as suggested in the answer to the first question.

5. In iritis, give as for impending paralysis.

In all forms of syphilis I prefer mercury; and in the rare cases in which it cannot be borne, gold or platinum are more trustworthy substitutes than iodine. The vegetable alteratives are worthless.

W. F. W.]

The Medical Digest.

MIXTURE AGAINST VOMITING.

℞.—Menthol ..... ℥ss.
Alcohol ..... ℥ss.
Syrup..... ℥iijss.
A teaspoonful every hour.

VILLACABRAS MINERAL WATER.—In treating a case of Bright's disease (chronic desquamative, due to malt liquor) recently I found the saline diuretics fail to give relief to the symptoms. These were dullness, anorexia, headache, dizziness, nausea, etc., etc. I accordingly directed the patient to get a bottle of Villacabras water, and take a wineglass before each meal. The water proved so efficient as a purgative that he reduced the dose at once to one-half. The relief that ensued was so marked that the man returned to me quite enthusiastic, fully persuaded that in Villacabras he had found an effectual remedy for all his ills. In two other cases the like pronounced good effects have been manifested.—W. F. W.

DERMATOL. — Coloranti recommends this drug for the colliquative diarrhœa of phthisis, and for diarrhœa of typhoid fever. He gives it in doses of 5 to 10 grains, up to 30 to 90 grains per day, alone, with opium, or in mucilage. In that of acute enterocolitis, of malaria, and of convalescence it also proved of value. The reports are so favorable as to warrant an extended trial of this promising drug.

MAGGOTS IN THE EAR.—Dr. Dolph reports (*Indiana Medical Journal*) a case where he injected a weak solution of carbolic acid, and in a few minutes over seventy maggots, about one-eighth of an inch in length, crawled out. The patient had been deaf for years in that ear, and always had a slight discharge from it.

Also, the editor refers to *Leidy's Annual* for 1892 for valuable notes on myiosis intestinalis, and says that in myiosis narium, any fixed or volatile oil will promptly destroy all lice, mites and insects.

SECRET SPECIFICS FOR INEBRIETY.—Dr. Norman Kerr says: One so-called remedy consists of fourteen different drugs, dispensed twice a week, at a Continental dispensary; two secret specifics claimed to cure 100 per cent. He had hopes of meeting with some which would guarantee 101 per cent. of cures.

The composition of these magical medicaments is carefully concealed, the ingredients of some of them being changed frequently to baffle analysis. There ought to be legislation compelling stability in the composition of all pharmaceutical preparations, with registration and an open statement of the contents.

A GROWING CHILD'S FOOD.—When a year and a half old, children may have baked potatoes and some of the fresh green vegetables, as peas and beans, writes Elizabeth Robinson Scoville in her valuable department in the November *Ladies' Home Journal*. About the same age, if most of the teeth have come, they may have meat at dinner. Steak, mutton chops, roast beef and meat of chicken, cut fine, as they cannot masticate them properly, may be given. Salt meat, the dark meat of poultry, with gravies and made dishes, must be avoided. Fresh fish may be eaten but must not be fried.

Eggs should be cooked by placing them in boiling water, removing the saucepan from the fire and letting the eggs remain in the water ten minutes, so that the whites will not be hardened. One a day is enough to use.

The best test of the digestibility of the food is the improvement of the child. It should gain steadily in weight, the scales showing a slight increase every week. The eyes should be bright, the flesh firm, the skin clear, and the whole appearance betoken health. When a baby is ailing, in a large majority of cases the food is at fault.

TREATMENT OF DELIRIUM TREMENS.—Dr. Norman Kerr believes this disease to be due to the cumulative specific action on the cerebral tissue of the alcoholization of the blood, and that the best hope of cure consists in natural exhaustion inducing sound sleep, thereby avoiding the administration of alcoholic liquors and opiates, chloral, bromide of potassium, and all narcotics. He reports a case exemplifying the differing results of narcotic and non-narcotic treatment. A patient, aged forty-eight, in his second attack, was treated with opium and the bromides, and in his third attack only with liq. am. acet. In the former seizures, even after sleep, he was unrefreshed, and so violent that he had to be restrained by force until exhaustion procured natural sleep, his only beverage being coffee. In the latter seizure, two years later, he was treated with liq. am. acet., at first in drachm doses every hour; milk, beef juice, broth, and coffee were frequently given. In about seventy hours he had a sound sleep for four hours, followed in four hours more by a sleep of twenty hours' duration. The recovery was quicker than in the second attack.

—*Quarterly Journal of Inebriety.*

MENTAL DERANGEMENTS FROM ORGANIC SULPHUR COMPOUNDS.—Dr. Benjamin Ward Richardson, in *The Asclepiad*, observes, apropos of two cases of peculiar mental derangements induced in workmen exposed to the fumes of sulphuretted hydrogen, that, as far back as 1870, he had called attention to a new and special fact, which was that sulphur compounds might be readily constructed in the living animal economy, and his further research brought him to the conclusion that

the influence exerted over nervous matter by the element sulphur, in disintegration, was so marked in mental aberration, that it was inevitable that nervous affections, attended with or without paralysis of the voluntary muscles, must be accepted as due to the presence of compounds of this element. We have thus a rational explanation of insane conditions produced as deliriums from intoxicants developed in the vital organic chemistry. The doctor is desirous that, in days to come, when physicians are diagnosing and successfully treating diseases of a nervous character, at present incurable and inscrutable, from studying the excretion of sulphur compounds from the bodies of their pa tients, the credit of the method may be honestly accorded to the English school of the nineteenth century.

Lack of Hæmatine the Cause of Anæmia.—Dr. E. Maurel (*Faculty of Medicine, Toulouse*) has given the name of hypohæmatosis (deficient oxygenation of the blood) to the collective symptoms resulting from a slight but prolonged deficiency of hæmatine. This deficiency leads to anæmia. These conditions until now have been confounded, they having numerous symptoms in common, but these two pathological states require abso lutely different, not to say opposite, treatment; because whilst anæmia is due to a lack of nutrition, requiring rich alimentation, etc., for its cure, this treatment is harmful in hypohæmatosis, which requires adequate amount of oxygen for combustion. To justify these conclusions he gives the full details of his observations in twelve cases, of persons ranging from three to twenty years of age. These cases occurred within the space of three years, and in each one was followed by complete cure through resort to the use of respiratory gymnastics. General gymnastics are useless. He states that, as the most frequent cause of the complaint is the narrowness of the chest, the respiratory gymnastics tend to enlarge the thoracic section; and that hereafter in all cases of anæmia it needs first to combat the hypohæmatosis. Certain clinical facts lead him to believe that the same condition can be detected as complication in all the cases where *échanges hématosiques* are more or less *entravés*, such as pleurisy, pulmonary emphysema, tuberculosis, etc.
—*Bulletin Générale de Thérapeutique.*

Methods of Operation for Carcinoma of the Rectum.—Of late years, the sacral method of operation has almost replaced that of the perineal. The number of cases radically operated upon relative to those by the palliative method, increased as follows: 1877–82, radical 26, palliative 14; 1886–91, radical 68, palliative 8. It is to be considered contraindication when the tumor overlaps (Uebergriff) the bladder, or when the upper end of the tumor is felt, bimanually, to be immovable from over the symphysis. The sacral method is chosen when the tumor reaches high up over the sphincter, or when the sphincter can be maintained, or when much bleeding is to be feared. If, by the maintenance of the sphincter, the tension is strong in the union of both ends (Darmenden), then is the sphincter split in the posterior middle line, and the two halves united with the upper portion (Darmstück), in order to paralyze, for some time, the sphincter. The temporary resection of the os sacrum, in the above cases, was not attempted because of the difficult nature of the wound, the danger of necrosis of the bone, and the impossibility of allaying or preventing a sacral suppuration. There are 28 of these cases still living—18 sacral, 10 perineal. Continence was effected by the sacral method where it was possible to use the circular intestine needle (Darmnaht); relative continuence was mostly attained by the perineal method; complete incontinence was the consequence of the sacral suppuration.
—*Centralblatt für Chirurgie.*

Muscle-building.—To understand your own movements, study the joints and how best to use them. As a higher branch of physical inquiry, strive to acquire a perfect co ordination between mind and muscle, and thus learn to contract and relax the muscles by a mere effort of the will; do this both in groups and separately. Having gained this power, when you wish to expend a little superfluous energy, get into the country and have a good run. Should the tyranny of environment forbid that, then do the next best thing, which is walking. If you wish to acquire any physical accomplishments, boxing, wrestling, fencing, practise under some good teacher. Swimming you can learn by yourself, though not so well on dry land; or rather you

ought to have learned that in early childhood. Buy a bicycle or a horse, if you think it will pay for its keep. Or, best of all, if you are young enough, learn to tumble. After you have mastered that art, you can acquire all the others by merely looking on at them; at least, such has been my experience.

To know how to do these things is all very well in its way; like the beans of the late A. Ward, they are cheerful fruits if taken moderately. But if you practice any of them with the idea of gaining health and strength thereby, you will find, and perhaps when it is too late to mend matters, that you have made a large mistake. Such is not the way to life, physically speaking. Use judgment, and take this as your motto: good air and plenty of it for the blood, good food for muscles, and good sense in using all your parts and belongings.—Edwin Checkley, in October *Lippincott's*.

Bright's Disease.—At the Académie de Médecine M. Lancereaux brought up again the treatment of albuminuria. For him, albumen in the urine was only a symptom, and was of itself without gravity, consequently it should not be dreaded so much as the auto-intoxication produced by excrementitial matter, or in other words, uræmia. The means to employ against this complication is to establish the renal function by diuretics, and when these latter have no longer any effect, by drastic purgatives and frictions of the skin. Then when the uræmia has disappeared, an attempt should be made to repair the renal lesions. Iodide of potassium gives good results in the parenchymatous form of nephritis, while tincture of cantharides, 6 to 12 drops daily, is very successful in removing the dropsy in the interstitial form. As to milk, it is indicated whenever symptoms of uræmic intoxication exist. It was said that albuminuria has frequently accompanied diabetes, and such is the case, but under certain circumstances. In the first place there exist three kinds of glycosuria—constitutional or hereditary diabetes, nervous diabetes of Cl. Bernard, and that having a pancreatic origin. In the first kind, albuminuria is almost always present, depending on sclerosis of the renal artery. In that of Cl. Bernard, on the contrary, it is intermittent, and is intimately associated with congestion of both the renal and biliary organs. Obesity is favorable also to the development of albuminuria, of which the inciting cause may be found in the emphysema which so often accompanies the plethoric state. M. G. Sée said that he could not understand the employment of drastic purgatives and cantharides in the treatment of the affection under consideration, as their administration was totally opposed to all that physiology had taught on the malady. The only agents of any value admissible in albuminuria, in his opinion, are the iodides of potassium, calcium, or strontium. As to cardiac albuminuria it need not be treated. M. Lancereaux replied, insisting on the value of purgatives, and above all on the cantharides, which gave him wonderful results where the renal epithelium was affected.

Human and Fowl Tuberculosis.—Koch's classical researches on the causation of tuberculosis culminated in 1882—just ten years ago—in his claim, then made, to have discovered the cause, in the form of a well-defined bacillus. A decade has passed, and to-day every line of his original treatise, save a few statements of minor import, remains intact. His first great difficulty was to obtain a pure culture of the tubercle bacilli. Rivolta, in 1889, was the first to suggest that the bacilli found in ovian and in mammalian tuberculosis belonged to two different species. An exhaustive series of experiments made recently by MM. Straus and Gamaleïa show the difference between the bacilli causing ovian and those causing mammalian tuberculosis. The ovian bacilli developed luxuriantly at 43° C.; while the human bacilli ceased to grow if the temperature exceeded 41° C. The lesions produced by the inoculation of these cultures on animals were more striking, even than the difference in the cultures themselves. They inoculated fifty six guinea-pigs with human tubercle bacilli, and twenty-six with fowl bacilli. Whether the injection was subcutaneous, intra-peritoneal, intra-pulmonic, or intra-veinous, invariably the animals inoculated with human bacilli presented at death a generalized eruption; but if the bacilli were of an ovian source there was no eruption of visible tubercles. They next experimented on twenty fowls; injected quantities of pure cultures of human tubercle bacilli without producing appreciable

result; but the inoculation of a small amount of ovian tubercle bacilli caused death in a few weeks or months. The post mortem examination showed abundant bacilli in the organs. In fowl, therefore, we have animals absolutely refractory to human tubercle bacilli, but succumbing easily to their own variety. The destructive nature of human tuberculosis is beyond question. Men are most generally infected by the inhalation of the dried sputum of their fellow-creatures. Fowl tuberculosis is also as destructive to their species, and farmers have found that when an outbreak of this scourge occurs that nothing less than the killing of all the birds will rid their farmyard of danger. From the distribution of the anatomical lesions in fowl it seems probable that infection occurs through the intestinal tract. —Dr. Alfred R. Parsons, in the *Dublin Journal of Med. Sci.*

Trichinosis.—Mrs. T., aged sixty five years, was seen about a week after ushering in of disease with diarrhœa and colic. Muscular pains were present, and became, in a few days, most severe in back and legs. There was some soreness in muscles of arms; appetite diminished; face was considerably edematous. After the first week of my attendance, her bowels became constipated, and required laxatives throughout her affection. As soon as the nature of the disease became known to her, she declared her case beyond a cure, and no argument would convince her to believe otherwise, or instill a spark of hope into her mind, which was preoccupied with the preparation of her soul. She became perfectly helpless, occupying the same position in bed almost constantly. Besides the edema of the face, her feet, legs, and thighs soon showed a dropsical tendency, and gave additional trouble in the handling of the patient. After four weeks of illness, bronchitis set in suddenly with profuse and tenacious secretions. Insomnia, which had been a constant symptom, now became alarming, and was followed, on the fifth week, by muttering delirium. This condition lasted to her death, on seventh week of illness. The treatment of the case was, in the main, of a tonic and nourishing nature, as far as she accepted of it, being unruly and often refusing proper supportive measures. Bismuth, succeeding a saline cathartic, was of some benefit in relieving diarrhœa. Bromides were tried for insomnia without benefit. Hyoscyamus was successful in producing sleep when insomnia first set in, but as the case advanced, this most distressing symptom seemed to resist all medicines of repute for its relief. Diuretics were of little advantage. The secretions of the kidneys remained scant and highly colored, sometimes being entirely suppressed for thirty-six hours. Antifebrin and salol, with stimulants, were of benefit to partially alleviate the pains in muscles. Motion was insisted on, but after several trials, the patient became again despondent. Once or twice she was assisted in walking across the room, and soon stepped without support, but she refused to take systematic exercise, stating that it was useless to punish her in this manner, as there was no hope for her recovery. Of nineteen cases of trichinosis, this was the only one to terminate fatally. The outcome of this case might have been favorable had the patient submitted to the treatment, and been of a more cheerful disposition.

—*Memphis Journal.*

Some Thoughts About Dyspepsia.—Indigestion means something more than loss of "tonicity" to the digestive tract, and the primary cause may be quite remote from the affected organ. To assist nature to eliminate the disease, the cause must be known in each individual case and the idiosyncrasies taken into account. Gastric juice contains about nine hundred and ninety parts of water in one thousand, and the remaining portion is made up largely of albuminoid matter, known as pepsin, and a free, uncombined acid, with sodium chloride, and a few minor ingredients. Pepsin alone, without its auxiliaries, is almost worthless. The digestive ferment, if it be deficient in acid, is really made worse by the addition of pepsin; it is the acid that should be administered; this is also true of every ingredient of the gastric juice. Give pepsin when the gastric juice is deficient in acid? No; but relatively decrease your pepsin and increase your acid. Give pepsin when the gastric juice is deficient in water? No; but relatively the pepsin, acid, etc., and increase the water. Give pepsin when the stomach is inactive—when the glands are partially atrophied, when the organ itself lacks "tonicity?" No; the stomach must perform its own work. Nature

hates a lazy member, and she will eliminate it by atrophy if there is nothing for it to do. Normal gastric juice contains germicidal properties, but in proportion as it varies from the normal, so does it become a source through which infective diseases may be propagated by germ development.

Peptones, in a majority of cases of dyspepsia, are absolutely harmful. The constant use of pre digested food must produce partial atrophy of both the muscular and glandular structures of the stomach. Milk alone given for nourishment is harmful, though to it be added the lime-water, the pepsin, and the pancreatin, if the dyspeptic dislikes such food.

If gastric juice be deficient in any or all of its component parts, either quantitatively or qualitatively, if improper food be taken, or food be taken at improper times, pathological conditions are induced, which are expressed by the bewildering, because too general, term dyspepsia. The treatment of this affection depends upon the proper differentiation of the conditions that produce it; conditions that are susceptible of classification. Isolated facts mean little; comparative facts mean much. Classified knowledge points to an intelligent, rational method of treatment with mathematical certainty.—Dr. A. A. Young, in the *Medical Record.*

Sodium Salicylate as Dressing for Wounds.—J. T. Hall, of Chicago, recommends salicylate of sodium as a dressing for wounds. He says: "A man forty years of age, had been hurt by the sharp edge of a large beam striking him on the head, making a large and deep scalp wound. When I looked for my pocket-case of instruments, I found that I had forgotten to put them in my pocket. So I took a pair of scissors and a razor, and shaved off the hair from the wound, and with a common sewing needle with cotton thread, as no silk was to be obtained, sewed up the wound, which required a number of stitches.

"The patient drank more or less all the time, and was under the influence of liquor when I saw him. My first thought was to guard against erysipelas. When I opened my case to get something to dress the wound with, I found that I had nothing with me that would answer except a small quantity of salicylic acid, which I first thought to sprinkle on the wound dry, as I had often done, but found that I had not enough to cover the wounded surface, so I asked for a glass of water and some baking soda. I dissolved the acid with the soda, and then added water enough to make about a twenty per cent. solution, then taking a piece of muslin of three or four thicknesses, I saturated it with the liquid, and applied it to the wound, directing them to renew the application every two or three hours, or often enough to keep the wound moist until my return the next day.

"Great was my surprise, at my visit the next afternoon, to find but little inflammation, the edges of the wound already beginning to contract together, presenting every appearance of healing by first intention.

"To make amends for my carelessness in being caught with my medicine case so empty, I had gone well supplied with dressings, intending to use whichever I deemed best, but concluded to let well enough alone, directing them to continue the treatment until I removed the stitches, which was done on the fourth day. I found the wound already closed, without a particle of pus, not even around the stitch openings. In fact, I had never seen a wound heal so nicely in so short a time.

"It has now been over twelve years since my experience, and I have as yet to see the first case that did not heal by first intention where it was properly used. I have also used it in minor surgery, both as a dressing and antiseptic, with the most gratifying results, and have come to regard it as the only true antiseptic dressing that I have ever used. While it is true that corrosive sublimate is a valuable antiseptic, it possesses poisonous properties which render its use most dangerous in many cases. The healing of wounds by first intention through the use of salicylic of sodium, prevents scars and often deformities from suppuration.

"I remember one case among many, where a boy received an injury to his eye by a piece of glass cutting through the lid dividing the cornea, about one-sixteenth of an inch. I not only healed the cut in the lid by first intention preventing ptosis, but prevented suppuration of the cornea, leaving the eye in good condition. I use from ten grains to two drams, each, of pure salicylic acid and bicarbonate of sodium to the ounce of water, reducing

the strength as the wound heals, always applying it either with gauze or three or four thicknesses of muslin, and keeping the wound moist with the solution until closed. I found with this, as with other dressings, that they should not be used with cotton, as there is in the process of repair a constant waste being thrown off which should not be retarded or confined by the use of cotton."—*Int. Jour. Surgery.*

TREATMENT OF SYPHILIS.—In a recent visit through some of the Northern cities we discovered that the doctors seem to reason from varying standpoints concerning the treatment of syphilis. Many of them lose sight of the fact that the disease in time dies out in the circulation, leaving a *detritus*, so to speak, to be collected and harbored in the various organs and capillary net-work of the body, until dissolved by therapeutic or natural processes before being eliminated. We are glad to find some of them, however, who view the disease in this light, and who use mercury in the primary and secondary stages to aid in killing out the disease, *per se*. Afterward supporting the patient, and using solvents for this *detritus* in conjunction with hot baths for the eliminating process, and attempting to substitute the loss in volume of circulation by the imbibition of pure drinking water.

* * * * * * * *

The five things necessary in the first two stages of the disease are, emphatically :

1. Germicide (Hg.).
2. A solvent (pot. iod. ; sod. iod.).
3. Supporting diet to make new blood. Ol. morrhuæ. Beef, mutton, chicken, game, milk, eggs, bread and butter.
4. Hot baths.
5. Pure drinking water.

* * * * * * * *

Hot baths for eliminating purposes should be given only under favorable circumstances.

1. The patient must be physically strong enough to stand the sweating, and 2. The barometric pressure, the temperature and climate, must be uniform in order to maintain a steady and gradual relaxation, so that the process of elimination, once started, can be kept up and not checked twenty-three hours in the day to one hour of relaxation.

We believe in giving mercury in tolerable doses, and giving it alone. We give it to destroy the active syphilitic poison. We support the patient, because, in giving mercury, some red blood corpuscles must be destroyed, and we must aid in substituting others.

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We give the iodides as much on account of the potassium—sodium or ammonium (as the case may be)—as we do on account of the iodine.

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The pure drinking water is necessary. Seventy-five per cent. of the normal make-up of animated beings should be water. The purer the water taken in, the better the condition of the blood and fluids of the body.

Not four men in ten are three-fourths water, as they should be. Hence the circulation is wanting in volume, and the body in rotundity.

The blood-vessels, and particularly its capillaries, are not filled to normal capacity. Any impurities in circulation must then avail themselves of the many resting places afforded by this diminished size and partially collapsed condition of the smallest blood-vessels. The blood impurities from syphilis, rheumatism, tuberculosis, and the hundreds of other so-called constitutional diseases, we find making the first appearance of their ravages in organs supplied by the minute blood-vessels ; *e. g.*, the skin, the joints, the glands, the lungs, the brain, the bones. Increase the volume of the circulation, and use solvents—these particles are allowed to pass to the proper emunctory organs.

—*Hot Springs Med. Jour.*

SULPHITE OF ZINC AS AN ANTISEPTIC IN TYPHOID AND CHOLERA.—Many years ago I introduced sulphite of zinc as a salt specially suited for general use as an antiseptic. At that time the cost of producing this salt was against its being used as a commercial sanitary agent. The manufacture of the sulphites has, however, assumed of late years a commercial aspect ; in fact, there is now reason to suppose that sulphite of zinc can be, and is, manufactured at a less cost than any other zinc compound.

A few years ago Dr. F. Heuston, of the Adelaide Hospital, and myself, also applied the zinc sulphite to fabrics for antiseptic dressings, as it can be deposited in the fibre of the material in a semi-soluble condition by double decomposition. It, therefore, specially lends itself to such an

application. In this form it has been extensively used in the hospitals, and experience shows that not only does it possess the combined antiseptic properties of a zinc salt such as the chlorides, but also the special antiseptic action of the sulphites, and yet with all we have the healing properties of oxide of zinc.

The zinc sulphite is a very insoluble salt, being soluble to the extent of 150 grains per gallon only, at ordinary temperatures, but this amount is sufficient to keep up a permanent germacide condition in any supernatant fluid, chiefly due to the fact that the sulphite is always absorbing the available oxygen and passing into the more soluble sulphate.

Some time ago I was conducting experiments with the excreta of typhoid patients, and as these experiments required some considerable caution, I made use of sulphite of zinc for the purpose of controlling the development of typhoid germs. I was struck with the permanent character of this control. I will not go into the question of these investigations here, but merely wish to place before this meeting illustrations of the efficacy of this salt in this respect. If we consider for a moment, I think we shall perceive that this partial insolubility of the antiseptic is of special value when disposing of the excreta of typhoid and cholera patients. Sewage of this nature always contains a certain amount of insoluble matter, which of a necessity caries down with it, by virture of the attraction of mass, the infinitesimally, but yet solid, germs. The retarding influence of any soluble disinfectant must, therefore, be of a more or less temporary nature, because in a flow or steam of water, such as would be found in a sewer, there must always be a tendency for the disinfectant to be washed away from the more solid portions with which the germs are chiefly associated. But in the use of an antiseptic such as sulphite of zinc, the supernatant liquid is permanently antiseptic, whilst the more dangerous septic deposits are present with a store (if I may use the term) of retarding influence. Specimens were exhibited which showed this action in a marked manner. They were procured by inoculating sterilized gelatine with typhoid excreta, some with and some without zinc sulphite. When placed side by side in the incubator, the results were strikingly different.

I also wish to draw attention to the manner in which the germs have been volatilized, so to speak, in the tubes in which they have been formed. The germs have not only been carried to the under surface of the cotton wool plugs with which the tubes are closed, but have even penetrated to a slight extent the loose under surface of the wool. The carriage of these germs can hardly be explained by the "raft" theory of Prof. Tyndall, because in these sterilized tubes we have no atmospheric dust to act as rafts. I believe the germs are carried by the clouds of volatile liquids, just as we see on a much larger scale rain clouds able to carry the comparatively large and coarse particles of soot.—*Med. Press.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. Bing, M.D., Chester, Pa., Translator.)

Coryza :

℞.—Hydrochlorate of cocaine..... 1 gr.
Distilled water..... 50 gr.
Introduce a small tampon of cotton wet with above solution into the nostrils twice a day.

Or,

℞.—Cocaine hydrochlorate... 0 grm. 45 cgrm.
Menthol ... ... 0 grm. 75 cgrm.
Coffee, roasted and finely powdered..... 1 grm. 50 cgrm.
Boric acid..... 12 grm.
Use four or five pinches six times a day.

Or,

℞.—Naphtholine, in impalpable powder,
Boric acid.....āā 24 grm.
Camphor,
Ext. violet.....āā 0 grm. 75 cgrm.
Ess. rose..... 20 drops.
As snuff.

Chronic Pharyngitis :

℞.—Ergotin..... 0.75
Tr. iodine..... 4.
Glycerine ..... 30.
Locally three times a day by brush.

Ozena :

℞.—Sulpho-ricinate soda..... 90.00
Naphthol beta..... 10.00
Two spoonfuls in a glass of water for nasal douche.

—*Revue Internat. de Rhinologie O. and L.*

Extraction of a Needle from the Larynx (Dr. Chas. Goris).—During a meal the patient swallowed among the food a needle. At the moment a sharp pain was felt, which ceased after a time, and had entirely vanished after thirty-six

hours. Unsuccessful attempts had been made to remove it before Goris saw the case. On examination, he was likewise unsuccessful, and felt convinced that the body had descended, and he sent the patient home. Two days later she returned complaining of intolerable pain during deglutition, and in speaking. On examining again with the laryngoscope the needle was plainly seen in the larynx; it lay horizontally and antero-posteriorly. The point against the arytenoid cartilages, the eye end engaged in the tissues at the base of the epiglottis, causing the point to be forced into the mucous membrane every time the patient attempted to speak. The extraction was performed by means of Faurel's forceps. The needle was buried for about a third of its length in the tissues.
—*Revue Internat. de Rhinol. O. and L.*

ANTI-CHOLERA SCAPULARY.—The *Echo*, of Paris, advertised as follows:

"These scapularies, on which is embroidered the picture of the Blessed Virgin, and which have been blessed by our holy father, the Pope, have marvelous power in protecting the faithful against all indisposition, especially choleriform affections.

"N. B. The length of the ribbons allows of the scapulary being placed over the pit of the stomach. Placed over this part of the body it stops diarrhœa instantly. They may be obtained by sending by Post office order to," etc., etc.
—*Progres Med.*

A MOTTO.—Let us so build that we shall give no occasion to those who follow us to demolish that which we have built.
—*Gabriel Charmes.*

PARCKHAUER proposes the use of a solution of caustic potash with scraping, as a treatment of ingrowing nails, offering great advantages over the usual radical operation. He applies a 40 per cent. solution, and after a short time scrapes the nail with glass, and alternates these until the nail is reduced to the thickness of writing paper, when he raises it out of the groove and excises the incurved portion. The cure is rapid, and generally complete.—*L' Union Med. du Canada.*

POST-GRIPPAL, SPASMODIC COUGH (*Marseille Médical*) Dr. Oddo.—The conditions which concur in the development of spasmodic cough as a sequel to influenza, are of two orders. The first, dependent on the primary disease; the second, on the predisposition of the patient. The persisting paroxysmal cough seldom appears after the severe forms, but most frequently after moderate attacks. Sometimes even after a very mild attack, the individual is afflicted with a very persistent cough. As to individual conditions, they may be nil; nevertheless women appear to be more often affected than men, elderly persons are more exempt than younger persons, while children seem to be quite liable to it.

Neuropathics constitute an important part of the subjects of post-grippal cough. In them the grippe has exacted to a high degree the nervous susceptibility, and the cough is a resulting phenomenon. The resemblance between this variety of cough and whooping-cough is very striking, so much so that the differential diagnosis is frequently difficult. The existence of commencing pulmonary tuberculosis is, as may be supposed, a very favorable condition for the production of persistent spasmodic cough. A category, frequent enough among coughing subjects, is formed by those affected with granular pharyngitis, which, at the time of the attack of influenza, is revived, and later on, kept up by the cough, which occupies thus the relation of cause and effect. In this category may be placed smokers subject to slight pharyngitis; also drinkers, professional or non professional speakers, etc. In short, there are two factors in this post-grippal cough—the grippe, which establishes the excessive "reflectivity," and a local cause which determines the reflex. Of these, the first alone is constant; the second may be wanting sometimes, but is often overlooked. The local difficulty, created or not by the grippe, is of such character that the spasm which it determines acts as an excitant. If this cause is wanting, the cough must be referred to excessive excitability of the sensitive nerves of the upper air passages, which is so great that the least irritation is sufficient to cause the reflex. The duration varies from a few days to several months. The treatment is unsatisfactory. The nervines have given the best results, especially antipyrine. Change of air is frequently beneficial.—*L' Union Med. du Canada.*

[AN application of nitrate of silver with

the use of citrate of iron and quinine has cured several cases where the cough seemed due to granular pharyngitis. B.]

TREATMENT OF DIPHTHERIA BY CHROMIC ACID (Lescure).—The treatment of diphtheria to be efficacious must comprise the destruction of the false membrane (the nidus in which the germs proliferate, and whence they go to poison the whole organism), and also must include the introduction into the circulation of a substance capable of destroying the bacilli which have already contaminated the system. And here is the difficulty, to find an agent strong enough to destroy the bacillus and yet not capable of toxic effect on the economy. It is now known that infectious symptoms are due not to the dissemination of the bacilli (for even in rapid cases they are not found in the blood), but to the absorption of a toxic matter produced by them, which spreads very quickly through the whole organism.

The problem is reduced to the destruction of the false membrane (the laboratory of the microbe), before time has been allowed for the spreading of the poison, and at the same time the sustaining of the patient's strength, or resistance to the disease. The author carries out the indications as follows:

1. Produces modification of the false membrane by touching it with a solution of chromic acid, 40 per cent., applied one, two or three times in the twenty-four hours.

2. Induces sterilization of the neighboring parts directly, by applications of tannic acid 6 grms, glycerine 30 grms, repeated three or four times daily over all the surface accessible, and indirectly by tr. eucalyptus, in the dose of 3 to 10 grms., according to age.

3. Keeps up the strength by alcohol, nux vomica, quinine, milk, coffee, tea, regular feeding, and the use of oxygen.

Bulletin General de Therap.

THE USE OF CITRIC ACID AS A MEANS FOR THE STERILIZATION OF WATER DURING CHOLERA EPIDEMICS (Dr. Christmas).—Since the experiments of Koch and Kitasato have shown the extreme sensibility of the cholera bacillus to acid media, it follows naturally that it might be an advantageous plan to render all water used for domestic purposes slightly acid, in reaction, during an epidemic of cholera. The experiments of Koch on the influence of HCl, on the development of cultures of the rod-shaped bacillus (B. virgula), also the demonstration of Kitasato of the prompt death of the same bacillus in the acid gastric juice, have only found a restricted application, practically-perhaps, because the employment of HC, is not without its inconveniences in thl hands of the public. The necessity of e more easy means of sterilization of watea than by boiling is a question of importr ance and merits attention. Citric acid, after many trials, has proven even in weak solutions a ready and practical method for purifying water of cholera germs. It has also been successful when used in typhoid fever, even when in weak solution.

In epidemics it may thus render great service by the sterilization of the whole quantity of water used for domestic purposes. The most practical method of use is as follows: Every morning the quantity of water necessary for use during the day is placed in sufficiently capacious reservoirs, of which the best are porcelain lined vessels. For twenty or twenty-four pints about 10 grms. (ʒijss) of citric acid are dissolved by stirring. The solution is of agreeable acid taste, and it is capable of being used for every domestic purpose. The solution is well borne, even by children. It does not provoke diarrhœa and has no harmful effect on the teeth. It would seem to be available as a prophylactic where cholera is endemic.

—La Medicine Moderne.

TREATMENT OF CHOLERA BY CHLOROFORM COMPOUND (Desprez).—The object of the treatment is, first, to destroy in the digestive tube the bacilli and their products of secretion; second, to calm the painful spasms of the stomach which render the organ refractory to ingesta; third, to stimulate the functions of the skin which are so closely connected with those of the alimentary canal and the kidneys; fourth, to introduce into the economy, as fast as can be absorbed, substances which will help to re-establish the normal composition of the blood, and tend to restore its fluidity.

The following formula is the one the author uses for these purposes:

℞.—Chloroform	grm.	j.
Alcohol	grm.	viij.
Acetate of ammonium	grm.	x.
Water	grm.	xl.
Syrup of hydrochlorate morphine	grm.	$\frac{1}{10}$.

M.—A large spoonful every half-hour till the symptoms yield. Hot water bottles to be placed around the patient's body.

This treatment gave in 1875, 8 cures in every ten cases; 1876, 72 cures per 100 in tropical countries,—as the French Indies, Cochin-China, Bona and Aleppo. In temperate countries the author thinks 80 to 90 per cent. could be cured. As a preventive, chloroformized water should be taken in the strength of $\frac{1}{500}$ to $\frac{1}{1000}$.

—*La France Médicale.*

Iodoform Bougies.—Dissolve in a weighed capsule, 6 grms. gelatine in 20 grms. water and 3 grms. glycerine. Evaporate until the whole weighs only 20 grms. Add 11 grms iodoform, then pour into warmed moulds. These bougies contain nearly a third of their weight of iodoform.

—*La Medicine Moderne.*

Treatment of Erysipelas.—Lingi d'Amore has taken up the experiments of Lombardi Lucke and Erlach on the treatment of erysipelas by spirits of turpentine. He has used it principally in medical or spontaneous erysipelas. He first studied the action of turpentine on the urine on account of the renal lesions. Apart from the characteristic odor, he noted nothing uncommon. He then used the turpentine either by frictions, by applications with a brush or wad of cotton over the affected part, which was then covered with wadding. The duration of the disease was reduced to about five days, counting from the application of the remedy, till the disappearance of the disquamation; the congestion was stopped and circumscribed from the end of the first day of treatment, and the pain relieved. The author considers that turpentine acts as a bactericide.

Caraguni has also taken up the study of the question, and recommends an application every three hours of an etherial solution of tannin and camphor, as follows:

Tannin	1 grm.
Camphor	1 "
Ether sulphuric	8 "

—*La France Médicale.*

Physiological and Therapeutical Action of Somnal (Myers).—The contact of somnal with the mucous membrane produces no local irritation. Applied directly to the heart of a frog somnal produces a diminution of the electric excitability of the cardiac muscle, and finally stoppage of the heart in diastole.

In a dose of 2 to 4 grammes it exerts no influence over the heart, either in man or mammiferous animals. On the contrary, in toxic doses it engenders grave circulatory troubles, connected both with a local action exerted on the heart, and with excitation of the inhibitory centers.

In therapeutic doses somnal exerts only a weak influence over the pulse and arterial tension. It raises it a little at first, soon returning to its normal, and even descending a little below the normal. In toxic doses, somnal determines a strong diminution of the intra-arterial tension. With medium doses the respiratory movements are slowed and become deeper; with toxic doses they are accelerated, superficial and irregular, in consequence of a depressant action excited over the respiratory center. In medium doses somnal produces a calm sleep lasting several hours, without any unpleasant effect. It acts as an excellent saporific in all cases where the insomnia is not connected with severe pain or with syphilis.

—*Revue Generale de Med., C. and O.*

GERMAN NOTES.

(Translated by Herman D. Marcus, M.D.)

Cholera in Germany.—The Royal Prussian Deparment of Public Works has ordered a number of rules in case of cholera suspects found in railroad cars:

1. Cholera suspect is everybody who, during a cholera epidemic, exhibits symptoms of vomiting and diarrhœa. But there may be severe cholera cases brought under observation, ending rapidly in death, and showing neither vomiting nor diarrhœa; such cases may be diagnosed by the quick and extreme prostration and weakness which may attack the patient rapidly.

2. The train conductor should be immediately notified whenever a passenger is suspected to suffer from this disease.

3. The conductor must deliver such passenger at the next station, which station shall be supplied with necessary means for transportation for such suspects and proper room for the lodgment of such cases.

Should the train pass an intermediate station, it is the duty of the conductor to immediately telegraph to next main station of the presence of a suspect on his train.

The conductor shall have a complete list of such stations which are prepared to receive cholera suspects.

Should the passenger in question be desirous of leaving the train before such a station is reached, because it is his destination or because he desires to stop off, it will be necessary to leave the decision as to such procedure to the police authorities of such place, and if no objection is raised by them he may leave the train, but the conductor must immediately notify the agent of the station at which the suspect stopped off, and the agent will then, if the passenger be unwilling to remain at the depot until a physician may be called (in which case he must be isolated), take the suspect's name, home address, and address of place at which he desires to remain while in the place. The station agent will also immediately notify the police authorities of the arrival of such a suspect.

4. Whenever a cholera case occurs or one is suspected, all passengers, except such relatives or friends who wish to remain with the patient, will leave the compartment, and if more than one compartment use the same watercloset, all passengers traveling in these compartments must be immediately transferred to other compartments, but separated from the other passengers.

5. It is important to immediately provide the patient with a proper and comfortable place for rest.

6. The conductor of each train (passenger) will be supplied with a bottle containing about 30 ccm. of equal parts of simple tincture of opium (laudanum) and ether, from which he may give 20–30 drops to the patient.

7. The conductor must carefully observe all rules for disinfection, if he or his clothes come in contact with the excretæ of such patients ; he is also to advise such passengers who have come in contact with such dejectæ to properly disinfect themselves.

LOCAL APPLICATION OF CHROMIC ACID IN THE TREATMENT OF SYPHILITIC AFFECTIONS OF THE MOUTH.—Dr. E. Fribar (Aachen) recommends chromic acid in syphilitic affections of the mouth.

Plaques apalines, papules in the angles of the mouth, sloughing gummas, are readily healed by painting with a solution of chromic acid (1 : 2).

Chromic acid is also very efficient in the treatment of psoriasis linguæ. The tongue is first anæsthetized with cocaine, then dried with cotton, the diseased part isolated with cotton and then touched with a concentrated solution of chromic acid. After a few minutes it is well to rinse out with acetic aluminum. After completion of this little operation the mouth should be rinsed out with chamomile tea to which a little borax had been added. This procedure should be repeated in two or three days.

Chromic acid is also recommended in mercurial stomatitis.

—*Therap. Monatshefte.*

THERAPIE OF CHOLERA.—Prof. Rosenbach (Berlin) recommends the use of carbonic acid in the treatment of cholera, basing his treatment upon Frænkel's experiments—that the cholera bacilli, like other saprophites, do not increase in carbonic acid.

Carbonic acid should be administered as a gas, as it will then not neutralize the gastric juice, and because the gas is retained longer, and because it is probably absorbed without any disturbance of the digestive apparatus.

The best mode of administration is in the form of the artificial fluid, carbonic acid. Experiments made with carbonic acid have shown this treatment to be without danger. The resistance offered by the ileo cæcal valve and the pylorus may be overcome by administration of opium, thereby relaxing the bowels sufficiently to permit the entrance of the gas into the small intestines.

—*Berl. Klin. Wochenschrift.*

SPECIFIC ACTION OF SALOL IN CHOLERA.—Regarding salol as a specific in cholera, Dr. William Loewenthal says : " The treatment advocated by me, consisting of a first dose of 30 grains of salol, followed every half hour or hour with doses of 7½–15 grains in cholera has been employed by Dr. Gonzalez, of Salvador (Philippine Islands) in fifty-three cases. He has lost only three of these cases, which, by the way, were in the last stages of the disease, when they came under his observation, showing a death rate of only 6 per cent., while the present and previous epidemics have a death rate of 45 per cent.

—*Deutsche Med. Wochenschrift.*

IPECACUANHA AS AN OXYTOCIC.—Ipecacuanha is said to stimulate uterine contractions; two to three doses of 10–15 drops of the wine of ipecac, if given every ten minutes, have produced very marked contractions in a very short time.

—*Der Ærtzl. Pract.*

METHYL BLUE IN THE TREATMENT OF MALARIA AND GONORRHŒA.—Trintignau has, during his sojourn in India, employed the use of methyl blue in malaria. He took himself 30 grains during a severe attack, and a daily dose of 7½ grains has been sufficient to free him from the attack.

He employed it as follows: 7½–15 grains are borne very well for nearly two weeks, and neither disturbances of digestion nor tenesmus of bladder. The abundant urine was at first colored green, then dark blue. The urine retained this color for even five days after discontinuing the medicine, but did not contain albumen or casts Some patients had a blue color during such treatment. In severe attacks the daily (twenty-four hours) may be increased 30–45 grains.

The cases of gonorrhœa in which this drug was employed are as follows:

1. Man, aged twenty-two; gonorrhœa of fourteen days' duration; 7½ grains of methyl blue daily were prescribed for eight days. The discharge was decreased in three days, and disappeared entirely after eight days.

2. Man, aged twenty-three; persistent gonorrhœa; methyl blue given in doses of from 4½ grains to 11¾ grains (daily); cured in ten days.

3. Man, aged twenty two; persistent discharge, painful urination and erection; one month's duration; abortive treatment without success; 7½ grains methyl blue were given ter die; also urethral injections of aqueous solution of methyl blue. Result; cured.

4. Man, aged twenty-eight years; gonorrhœa of one year's standing; treated with injections of bichloride of mercury, quinine and zinc without success; two injections daily of methyl blue improved the case greatly in three days, and eventually cured the patient.

Methyl blue is supposed to color the microbes in the urethra, thus destroying their virulence and vitality.

—*Deutsche Med. Zeitung.*

News and Miscellany

INSTEAD of calomel, THE TIMES AND REGISTER of October 8th, page 397, lines 21 and 25 of second column, should have written hydr. chlor. Please correct.

J. P. FRANCEZ.

A RECENTLY elected Professor of the Children's Clinic at Innspruck, resigned the post because he had neither a lecture-room nor a clinic. It does seem as if some men wanted a great deal.

A JEFFERSON COLLEGE smoker was held in the therapeutic laboratory of the college, October 29, 1892, at 8 P.M. The advisability of establishing a Philadelphia branch of the Association was considered.

THE Southern Surgical and Gynecological Association holds its next session at Louisville, Kentucky, on November 15, 16, and 17, 1892. The President is J. McFadden Gaston, M.D., Atlanta, Georgia

MERCURY was employed to remove lead from the ear, with asserted success; but a recent writer (*Lancet*) states that repeated trials have shown that mercury has no effect on metallic lead. Solder is dissolved by mercury, though quite slowly.

A SEASONABLE DON'T.—Don't pay your subscription to any traveling agent, salesman, drummer, or bummer. Send direct to the office of THE TIMES AND REGISTER, 1725 Arch street, Philadelphia. Send at once, and you will get the numbers for the rest of 1892 for nothing. Only $3.00 a year, for fifty-two numbers!

DR. SUNDBERG, late editor of the *Pacific Medical Journal*, has been appointed United States Consul at Bagdad. This is a step in the right direction. The American doctor has made a record for himself as a missionary, and is the best possible material for the consular service. The supply is ample. He can also be readily spared.

On Arch street, Philadelphia, between Fifteenth and Eighteenth streets, there are located no less than thirty medical men and women, exclusive of dentists and druggists. Of these, twenty-nine could easily be spared as consuls.

We hope Dr. Sundberg will succeed in his new post at Bagdad, and bag dollars, as well.

THE *Alienist and Neurologist*, for October, 1892, contains: "Clinical Study on Double Athetosis," by Dr. Dimitri Ivan Michaïlowski, Russia; "Sentiment," by Professor Augusto Tebaldi, Padua, Italy; "Passivism—A Variety of Sexual Perversion," by Dimitry Stefanowski, Jaroslawl, Russia; "The Pathological State of Berkman, the Assailant of H. C. Frick," by Theodore Diller, M.D., Pittsburg, Pa.; "Experts and Expert Testimony," by Harold N. Moyer, M.D., Chicago, Ill.; "A Case of Simulated Insanity," by Professor Arrigo Tamassia, Russia; "Art in the Insane," by James G. Kiernan, M.D., Chicago, Ill.; "A Case of Cerebral Syphilis," by Frank G. Hoyt, M.D., St. Joseph, Mo.; "Torquato Fasso," by Dr. W. W. Ireland, Scotland. Besides the usual selections, editorials, Hospital Notes, Reviews, etc. C. H. Hughes, M.D., Editor, 500 North Jefferson Avenue, St. Louis. Subscription, $5.00 per annum; single copies, $1.50.

ARISTOL.—Nearly all drugs, whether or not originally intended for external use, have been applied at one time or another to local, exterior traumatisms, in the once current belief that "remedies that are good within, should be good without." The conspicuous failure of the many attempts to obtain a perfect dressing for suppurative conditions which should be equally good for accidental or operative injuries, constitutes an interesting section in the history of surgery. Even the later surgical dressings have, for the most part, proved failures in some essential quality. Some of them possessed an unspeakable odor, others were toxic, many were difficult of application, and a further series, though admirably adapted to a particular surgical requirement, failed as complete surgical dressings. The promptness, for instance, with which aristol was adopted by practitioners, demonstrated the great existing need of an adherent, stimulating, safe and effective cicatrisant. The evidence, thus far, appears to demonstrate that aristol has not disappointed the profession in any of these particulars.

A LEARNED professor and a young lady were talking about the association of ideas as an aid to the memory. She said:

"Professor, is it not strange how one thing brings up another?"

"Yes, an emetic generally does."

AT the recent meeting of the American Orthopedic Association held in the City of New York September 20, 21 and 22, 1892, the following officers were elected to serve for the ensuing year: President, Dr. A. J. Steele, St. Louis; Vice-Presidents, Dr. Samuel Ketch, New York; Dr. Arthur J. Gillette, St. Paul. Treasurer, Dr. A. B. Judson, New York. Secretary, Dr. John Ridlon, 34 Washington street, Chicago. The next annual meeting will be held in St. Louis, the third week in September, 1893.

WEEKLY Report of Interments in Philadelphia, from October 15 to October 22, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	1	1	Inflam'n bronchi	3	6
Aneurism of the aorta	1		" kidneys	10	
Alcoholism	1		" liver	1	
Apoplexy	13	1	" lungs	12	9
Bright's disease	14		" heart	1	
Burns and scalds	3		" peritone'm	3	3
Cancer	14		" pleura	1	
Casualties	12	2	" s. & bowels	1	8
Congestion of the brain	2	3	Leucocythemia	1	
Congestion of the lungs	1	1	Locomotor ataxia	1	
Congestion of the liver		1	Marasmus		22
Cholera infantum		2	Measles		1
Cirrhosis of the liver	6		Neuralgia of the heart	2	
Consumption of the lungs	40	12	Obstruction of the bowels	1	
Convulsions		13	Old age	10	
Croup		3	Paralysis	8	
Cyanosis		2	Purpura hemorrhagica	1	
Debility	2	3	Pyæmia	1	
Diabetes	3		Rheumatism	2	
Diphtheria	1	37	Rickets		1
Disease of the heart	27	2	Shock, surgical		1
" " hip		1	Scrofula		2
Drowned	1		Softening of the brain	1	
Dropsy	2	1	Tabes mesenterica		1
Dysentery		1	Tetanus	1	
Epilepsy	1		Tumor	5	
Fatty degeneration of the heart	2		Ulceration of the stomach	1	
Fever, malarial		1	Uræmia	2	
" puerperal	1		Vomiting during pregnancy	1	
" scarlet		6	Whooping-cough		1
" typhoid	7	4	Wounds, gun-shot	1	
Gangrene	1				
Inanition		13	Total	227	176
Inflam'n brain		11			

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S. Navy for the week ending October 22, 1892.

SPRATLING, L. W., Assistant-Surgeon. Ordered to Receiving Ship "St. Louis."

MORRIS, LEWIS, Assistant-Surgeon. From Receiving Ship "St. Louis," and to the U. S. S. "Monocacy."

ROTHGANGER, GEORGE, Assistant-Surgeon. From the U. S. S. "Monocacy," and ordered to proceed home.

RGEONS OF ENGLAND
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The Times and Register.

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PAGE

ORIGINAL ARTICLES:

TREATMENT OF GONORRHŒA. By William F. Waugh, M.D. - - - - - - - - - - - - - 501

OBSERVATIONS ON STRICTURE OF THE URETHRA. By G. Frank Lydston, M.D. - - - - - - - - - 504

EDITORIAL:

SPECIALTY DEGREES - - - - - - - - - - - - 508

A PLEA FOR CHEAP AND NASTY MEDICAL "EDUCATION." *S. V. C.* - - - - - - - - - - - - 508

GONORRHŒA - - - - - - - - - - - - - - 509

QUARANTINE INFECTIOUS DISEASE - - - - - - - 509

DESTRUCTION OF MOSQUITOES BY KEROSENE - - 509

EDICT IN THE MATTER OF THE SALE OF STAMPED MEDICINE PACKAGES - - - - - - - - - - - 509

LETTERS TO THE EDITOR:

Gonorrhœa in the Army - - - - - - - - - - - 509

Gonorrhœa. *Chenery* - - - - - - - - - - - - 510

Specific Urethritis. *Pixley* - - - - - - - - - 510

Gonorrhœa. *Paul* - - - - - - - - - - - - - 511

BOOK NOTICES:

Text-book of Ophthalmology. *Fuchs* - - - - - - 511

Hand-book of Emergencies and Common Ailments. *Bradford* - - - - - - - - - - - - 511

Diseases of the Kidneys and Bladder. *McNutt* - - 511

A Manual of Physics. *Peddie* - - - - - - - - - 511

PAGE

THE MEDICAL DIGEST:

Go to Egypt if You Want Children (*Lesseps*)—Red Bilberry in Articular Rheumatism (*Smirnoff*)—Treatment of Gonorrhœa by Injections of Potassium Permanganate (*Reverdin*)—Uncured Gonorrhœa (*Palmer*)—Dr. Goldenberg's Treatment of Acute and Chronic Gonorrhœa—Treatment of Stomach Diseases (*Hemme*)—Treatment of Gonorrhœa (*English Ex.*)—Some Modifications of Thiersch's Method of Skin Grafting (*Watson*)—A New Treatment for Acute Gonorrhœa (*Nordeman*)—Tired Ovaries (*Lanphear's Index*)—Gonorrhœa (*Wyeth*)—Gelseminum in Spinal Meningitis (*Hospital Gazette*)—Cannabis Indica (*Mattison*)—Egypt as a Health Resort (*Sandwith*) 507, 512–521, 525

THERAPEUTIC NOTES FROM THE FRENCH. *Bing*—The Principles of Treatment in Gonorrhœa (*Neisser*)—Fecundation of One Woman by Another (*Duhouset*)—Some Cases of Extra-Uterine Pregnancy (*Bey*)—Hay Asthma (*Tissier*)—An Absorbent Cotton for Surgical Uses (*Gay*)—Treatment of Cholera (*Peter*) - - - - - - - - - - - 522–524

NEWS AND MISCELLANY - - - - - - - - - 526

NOTES AND ITEMS - - - - - - - - - - - - iv

Original Articles

TREATMENT OF GONORRHŒA.

By WILLIAM F. WAUGH, M.D.

MY impression is that this affection is generally over-treated; that the specific nature of the disease is kept too prominently in the mind; while the general principles upon which acute catarrhs should be managed are ignored. In 1886 Mr. Firth published the results obtained in the treatment of 413 cases. He placed all upon simple diet for the first ten days; gave no medicine except a cathartic, and obtained the following results:

Injection.	Cases.	Average duration.
Chloral .....gr. iij. to the ounce.....	7	31.8 days
Soda salicylate, " v. " " "	13	31. "
Acid boric..... " v. " " "	25	30.2 "
" tannic.... " v. " " "	10	29.7 "
Iodoform ..... " v. " " "	11	29. "
Silver nitrate.. " ¼ " " "	14	28.4 "
Zinc chloride.. " ½ " " "	44	27.3 "
Warm water	23	26.6 "
Quinine ..... " ij. " " "	26	26.3 "
Lead acetate... " iij. " " "	20	26.1 "
Bismuth and glycerine .... 1 to 10.....	21	25.5 "
Zinc Sulphate. gr. v. to the ounce.....	40	24.3 "
Acid carbolic.. " xij. " " "	29	23.6 "
Corrosive sublimate..... "1-16 " " "	51	20.1 "
Potas. permanganate..... " j. " " "	30	19.9 "
Corrosive sublimate..... "1-16 " " " (warm)	49	17.5 "

The vehicle employed was usually mucilage of tragacanth. The question of what constitutes a cure must be answered before accepting any such results as more than approximative. Some may count a case as cured when it no longer reports for treatment; while others claim a cure when there is no longer any trace of the discharge apparent. Even this is not a just method, as in many cases the discharge will cease for a time and return after heavy eating, drinking, fatigue, or other excess. The only positive evidence of complete cure is the absence of the gonococcus from the urethral secretions on repeated examinations.

Mr. Firth does not inform us as to this point; nevertheless his results form a valuable contribution to our knowledge of the subject, all the more in that he does not write from the ordinary standpoint of the man who believes solely in the one remedy he himself employs.

In all cases the patient should be sent to bed, and placed upon low diet, saline diaphoretics and alkalies. Fever is to be met with salol, gr. v, every four hours, which has also a beneficial local action on the urinary mucosa. The administration of copaiba is to be deprecated. It certainly dries up the secretion, even

causing it to cease entirely for the time. In some rare cases this may be permanent; and then the attack is said to be aborted. But usually the discharge is only restrained, leaving the mucous membrane intensely congested, and it is a great relief to the patient when the discharge reappears after the copaiba has been discontinued. Weighing the few lucky cures against the many failures, with the positive injury to the digestive apparatus, I think we had better dispense with copaiba. The same remark may be applied to the other drugs of this class; they are much less active for good or ill, but equally objectionable.

The inflamed organ may be treated as in any other non-specific inflammation. It should be elevated, the scrotum supported by a suspensory bandage, and hot fomentations applied. Painting with iodine along the under surface of the penis is of some value in reducing the inflammation. The acetate or citrate of potassium should be given in full doses (ʒij daily) with a little spirit of nitrous ether. The bowels are to be kept in a soluble state by means of salines and hot enemas. No injections are necessary at the beginning, when the urethra is excessively sensitive. If any application be made to the inflamed membrane, it should be bland and soothing. Bismuth subnitrate or subiodide, suspended in mucilage or in oil, is probably the best local application that can be employed. Cocaine or morphine gives temporary relief, but hardly as much as the hot poultices and iodine.

After the inflammatory symptoms have subsided the injections are most useful. Great care must be taken to avoid unduly irritating the urethral membrane. Perhaps the bismuth and fluid petrolatum is the safest and best of all. Antiseptics may as well be laid aside, as none can penetrate the tissues as deeply as the gonococcus. Sedatives are to be applied as long as there is undue irritation. Astringents are useful only when all irritation has subsided, and the discharge continues from relaxation. The best results are then obtained from Erichsen's combination of chloride zinc, gr. x; acid gallic, gr. xx; water, ʒviij, with tincture of iron internally.

Chordee is to be prevented by the rest, low diet, laxatives, sedatives, and hot poultices. If in spite of these it gives trouble, morphine, gelsemium, tartar emetic and the bromides, alone or combined, serve to prevent this troublesome incident. A full dose of gelsemium is very efficient, if administered at bedtime.

Orchitis requires rest in bed and support to the scrotum. I formerly applied a 25 per cent. nitrate of silver solution over the affected testicle, but for some years have substituted bismuth, mixed with water to the consistency of cream, and applied liberally. This has proved quite useful, reducing the swelling and tenderness, without giving rise to any irritation. If there is any enlargement of the testicle remaining after the tenderness has subsided, the organ should be strapped with an india-rubber bandage. This is easily applied and removed, and allows of swelling should an acute relapse occur. With the use of adhesive straps, should an exacerbation occur, and the straps be not removed, the scrotum and testicle might be destroyed by the interference with the circulation, while intolerable pain would be felt until the constricting bands were removed. I once had a case of rheumatic orchitis, in which my patient narrowly escaped the loss of the affected testicle from this cause. By using a rubber bandage this danger is avoided, and the patient is also spared the pain incident to the application and removal of adhesive straps.

Gonorrhœal rheumatism, so-called, is really a septicemia. If any drug exerts a germicidal action upon the gonococci in the blood, it is not known to the writer. Quinine is the best remedy at present, with the other toxics, iron, strychnine, and arsenic.

Milton advocates the use of silver nitrate as an injection. He recommends it for patients presenting themselves before the discharge has become yellowish, in mild cases occurring in those who have had previous attacks, and when the patient insists on an effort at jugulation, at any cost, and is willing to stay in bed. If these conditions be present, he himself injects, once only, a 5-grain solution of silver nitrate in an ounce of distilled water. This is retained two or three minutes. The pain following is relieved by hot water locally. He then gives 4 grains of calomel, followed by a saline laxative every two hours until several loose stools have been procured. No food should be allowed but tea and toast. After each stool, the patient washes the

urethra out with a zinc sulphate solution, 4 to 5 grains to the ounce, retained until slight burning is felt. This is gradually increased in strength to 10 grains. The patient recovers in two or three days.

It is only in a few cases that this method is applicable, but it is then very efficient. In other cases he employs the alkalies, and injects a silver solution of ⅛ to ¼ grain to the ounce once daily, until the discharge ceases. He lengthens the nozzle of the syringe by means of a metal tube, two inches long, and, like every other successful practitioner, gives the injections himself.

Niemeyer recommended injections of tannic acid, 30 grains in half a pint of red wine. This will usually abort the attack, if employed before the discharge has become purulent. This agent restrains the discharge, and renders the concealment more practicable.

Corrosive sublimate stands first in Firth's list, but is so irritant to the urethra that it has been recommended to reduce the solution to 1 to 40,000, at which strength it is not superior to warm water.

All injections should be warmed to 100° F., before being used.

Dr. C. F. Taylor found that great relief was afforded by applying to the surface of the glands an ointment of cocaine in lanoline, 1 to 6.

Lydston employs, to abort an attack, a silver solution of 15 grains to the ounce, used but once, or a ½ grain solution of the same salt, every two hours, until pronounced smarting during micturition develops. He prefers prolonged irrigation of the anterior urethra with hot sublimate solutions, 1 to 20,000. This should be continued for thirty to forty minutes, and repeated two or three times in the first day only. This is followed by mild astringent injections.

For ordinary cases he prescribes absolute rest, low diet, no smoking, and the free use of alkalies. Cleanliness, free discharge of the secretion, and hot water locally are enjoined. He gives arterial sedatives during the febrile stage, and pichi in mucilaginous beverages. Ergot is useful in the later stages as an astringent. Twenty to thirty grains of potassium bromide at bedtime, serve to keep down sexual excitement, or a more powerful effect may be produced by the following:

℞.—Ext. ergotæ fl. ..... ♏ xv.
Tinct. gelsemii ..... ♏ v.
Potassii bromid ..... gr. xx.
Tinct. hyoscyami ..... ♏ xxx.
Syr. aurantii ..... q. s ad ʒss.
M.—S. Take at bedtime.

Opium stimulates the sexual organs. Sandal oil may be given early; the balsams only in the later stages; turpentine is then useful. He objects to the retro-injection tube, and to the use of soluble bougies.

Hugonnenq and Eraud obtained complete success from pyoktanin, injecting a 1 to 150 solution ten to fifteen times a day. Other writers, however, object to the drug in this strength, and recommend solutions of 1 to 3,000.

Castellan treated a large number of cases with injections of sodium bicarbonate; the average time required for a cure being twenty days.

The dry powder method is condemned by Lydston, but advocated by Hanika, who fills the urethra with a mixture of tannin, iodoform, and thallin sulphate, equal parts.

Malécot advises salicylate of mercury, 1 to 2,000, in ordinary cases.

Maurice says that the abortive treatment has no chance of success after the first few hours of the attack have passed. All attempts to jugulate the attack during its increasing stage are useless or dangerous, or give only false cures. The antiseptic practice has hitherto given illusory results. He prefers the antiphlogistic regimen, continued to the almost complete disappearance of the inflammatory phenomena. Repressive measures give good results only during the declining stage. Of repressives, he prefers copaiba and cubebs, with zinc sulphate injections. These are used but a short time, when, if not effectual, he returns to the antiphlogistics. This is his course also with all cases imperfectly cured.

Louis Julien seeks to abort the attack by the injection of silver nitrate, 1 to 30, through a retrograde syringe. For a fully developed case he employs one of the following injections:

1. Lime water, 1 part to 3 of distilled water.
2. Corrosive sublimate, 1 part to 5,000 of distilled water.
3. { Salicylate mercury, 6 parts / Soda bicarbonate, 100 parts } to 15,000 of distilled water.
4. Resorcine, 1 part to 50 of distilled water.
5. Pyridin, 1 " " 300 " " "

Injections are to be made every two hours, or after each urination.

Pyridine gives the best results. When there is no more pain left he gives copaiba and cubebs. This usually cures in about fifteen days. If not, he injects one of the following:

1. Bismuth subnitrate, 5 to 10 parts to 150 distilled water.
2. Bismuth salicylate, 5 to 10 parts to 150 distilled water.
3. Bismuth salicylate, 5 to 10 parts; Resorcine, 3 to 10 "; Iodol, 1 to 10 "; to 150 fluid petrolatum.

Inject twice daily.

Diday recommends an injection of tannin and zinc sulphate, each 1 part to 100 of water.

Ricord contributed the following:

Zinc sulphate	1 part.
Lead acetate	2 "
Sydenham's laudanum	4 "
Tinct. catechu	4 "
Distilled water	200 "

Du Castel speaks of the three sulphates—one part each of sulphate zinc, copper and iron, ten parts mucilage acacia, and 250 parts water. He gives internally a soft paste, consisting of copaiba and cubebs, equal parts, mixed with decarbonated magnesia.

Chopart's potion is as follows:

Copaiba	60 parts.
Alcohol at 80°	60 "
Syrup tolu	60 "
Mint water	120 "
Sp. nitrous ether	8 "

this, 3 to 6 spoonfuls per diem.

This constitutes the classical treatment. The antiseptic method consists in the use of silver injections to abort the attack; resorcine as a non-irritant injection for the acute stage, balsams following its subsidence, and returning to the anti-phlogistics if the symptoms warrant.

Audré Martin treats the acute stage by injections of quinine, 1 to 100; potassa per manganate, 1 to 2,000; mercury bichloride or biniodide, 1 to 20,000.

Alfred Fournier limits his suggestions to copaiba, cubebs and alkalies.

E. Vidal administers:

Gurjun balsam	4 parts.
Gum arabic pulv	4 "
Infusion star-anise	40 "
Syrup catechu	30 "

Take in two doses, at meals, followed by a glass of wine.

This is for old cases, and should be continued for eight days after the discharge has ceased.

Hirtz gives salol, with or without copaiba, cubebs or sandal.

Dreyfous also prefers salol, in doses of 75 to 120 grains daily, with cubeb and copaiba for speedy cure.

Rendu treats uterine and tubal gonorrhœa by local blood-letting, blisters, mercury and belladonna ointments, and opium for pain. He also flushes the vagina with sublimate solutions. In the chronic form, as long as the tumor persists, keep the patient in bed, with revulsives, especially the actual cautery. During menstruation insist on absolute mobility, and apply one or two leeches. If the tumor has disappeared, but pain remains, give thermal baths, or hot douches and irrigations, with potassium iodide in small doses. If these means fail, surgical interference is necessary.

Innumerable local remedies have been recommended, but all may be classed as sedatives or as irritants. The choice of these agents is of less importance than the care and thoroughness with which they are used. The physician should himself choose a suitable syringe and give the injections, at least the powerful and dangerous ones employed in the abortive method. Until one begins to do this he will scarcely realize the difficulty of properly injecting the urethra, or the inefficiency with which this is done by the patients. The best results are obtained when the greatest amount of care is given.

OBSERVATIONS ON STRICTURE OF THE URETHRA.

By G. FRANK LYDSTON, M.D.

FROM what has been said I think that the direct relation of stricture to the severity of the primary urethritis may be clearly seen.

It is a self-evident proposition that if what I have said regarding the relation of stricture to friction be true, the same holds good with relation to granular, congested and eroded patches in the canal. I believe, moreover, that within certain limits the indications for treatment may be the same. In addition to the element of friction in producing strictures and other lesions of the urethra, I acknowledge the importance of retained infections and inflammatory products at points of narrowing.

M. Desnos has recently called attention to what he terms slight traumatisms of

the urethra during erection as a cause of stricture. In my lectures for ten years past I have claimed that slight injuries of the mucous membrane, and perhaps of the corpus spongiosum, frequently result during urethritis, as a result of erections while the elasticity of the spongy urethra is impaired by plastic exudate. These injuries are, of course, most likely to occur if chordee be present, or if intercourse be attempted; but may happen when neither circumstance prevails. It is not necessary to "break the chordee" to produce them. Whenever any appreciable quantity of blood appears in a gonorrhœal discharge, such minute traumatisms may be inferred. These slight injuries often, in my opinion, form the groundwork for future stricture building.

Relative Frequency of Stricture in the Various Portions of the Canal.—No one who has not given this subject special study can realize the difficulty of forming an accurate estimate of the relative frequency of stricture in the various parts of the canal. The different standpoints of observation give widely varying results. Otis and Thompson can never be nearer together than they are to-day, unless both should accept the same standard as a criterion of stricture, and use the same methods of exploration and diagnosis. The Weir faction, with its normal points of contraction in the pendulous urethra, certainly cannot become reconciled to the teachings of Otis. I know of several excellent men with whom I have conversed, whose methods of reasoning are so widely apart that each stamps the other as an ignoramus. One begs the question by accepting the view of Otis that an urethra should take a sound of a caliber proportionate to the dimensions of the penis, and the other entirely overlooks the question at issue, by the assertion that "that kind of strictures can be found in healthy men." I once related a case of congenital stricture in the pendulous urethra to a prominent surgeon of this city, and he asserted that the patient could not possibly have a stricture, if, as I said, he could take a thirteen English sound. I presume that there are many in the profession who would claim that a patient who can take a thirty to thirty-five French sound has no stricture. Yet a patient may take a forty French sound and the case still demand urethrotomy. Number thirty may pass smoothly an obstruction, which a number fifteen bulb will easily demonstrate.

Believing, as I do, that any point of contraction or inelasticity in the urethra, in the presence of a pathological condition of the mucous membrane constitutes a stricture, I can unhesitatingly assert my firm conviction that stricture of the urethra is most frequent in the pendulous portion of the canal. If care be taken to exclude the element of deep urethrismus—which exclusion is not as easy as some authors would have us believe—the proportion is, I think, ten to one.

That great variance of opinion exists upon this point is well known, and Bumstead and Taylor long ago called attention to the fact that there could be no harmony of results between those who studied the subject upon the living, and those whose estimates were formed entirely upon observations of the cadaver. Folet, in 1857, called attention to the frequency of fibrous stricture in the pendulous urethra, and its comparative rarity in the bulbo membranous region. This author claimed that deep obstruction existed in all cases of stricture of the spongy portion, but that the deep structure was nearly always spasmodic and secondary to the trouble in the anterior portion of the canal. In 1866, Verneuil coolly appropriated Folet's thunder, and expressed essentially the same views, and in very nearly the same language. Otis, writing at a later period, while not so radical as his French predecessors, has promulgated similar views, but in a much more comprehensive and thorough manner. The relation of urethrismus to reflex irritation, more or less remote, as shown by Otis, is one of our most important modern contributions to the literature of genito-urinary pathology, and is decidedly complimentary to the genius of American surgery.

In estimating the frequency with which deep spasmodic stricture complicates obstruction in the pendulous urethra, an important source of fallacy exists. While a deep stricture may be demonstrated, in nearly if not all cases, by instrumentation, it does not necessarily follow that such deep strictures exist at other lines. A tender urethra resents a foreign body quite as vigorously as does the eye, and as soon as the sound touches a tender spot or sensitive stricture—even of large caliber—in the pendulous urethra, a pronounced reflex contraction is observable throughout

the entire canal, which is, of course, most pronounced in the deep portion. A spasm of the pendulous portion is not usually regarded as of importance; indeed, some surgeons discredit it altogether. I have found, however, that the spongy portion often contracts so firmly about the sound that it is felt to be firmly grasped during withdrawal all along the canal. This spasm in the pendulous urethra is of great assistance in diagnosis, as it serves to force diseased portions of the canal down in front of the shoulder of bulbous instruments of a caliber much smaller than the stricture will really admit. Thus it often happens that a good-sized sound will pass by obstructions upon which quite small bulbs will catch.

In some cases deep spasm exists more or less constantly; but I believe that in most of these cases there is an actual organic change at the site of the spasmodic stricture; this may be true organic deposit, an erosion, or a congested and granular patch. Under such circumstances it is often very difficult to determine, even approximately, the proportionate relation of spasm to organic lesion. Oftentimes the true condition of affairs can only be determined by subtracting the sources of reflex spasm in the anterior urethra by urethrotomy.

Reflex Neuroses from Stricture.—The remote or direct nervous disturbances incidental to stricture of the urethra are too often lost sight of in the strictly mechanical aspect of the condition. The decidedly complex relations of the genito-urinary apparatus to the sympathetic nervous system should receive more attention than is usually accorded them. Our observations of the reflex neuroses from genital irritation in children are a key to the solution of many problems in the urethral pathology of the adult. There is a general impression that a stricture is of little importance unless it produces distinct symptoms of urinary obstruction. When, however, one meets with cases of vesical atony, incontinence of urine, impotency, neuralgia of the cord and testes, lumbo-hypogastric and lumbo-sacral neuralgia, profound mental depression and other neuroses entirely and almost magically relieved by urethrotomy of strictures of large caliber, the importance of this question is brought before him in a very forcible manner. The relation of such conditions to congenital or acquired stricture at or near the meatus, is especially marked. I might relate numerous interesting cases of this character, did time permit. I have found this subject alone extensive enough for an entire paper, which I have now in preparation for the meeting of the Southern Surgical Association in November.

Toxæmia from Stricture.—The relation of stricture to uræmia—so-called—is not a new theme. Something might be said regarding the relation of shock from surgical operations upon the urethra to toxæmia and consequent urethral fever, but the subject is too comprehensive for discussion here.

The relation of absorption of ptomaines from the site of the lesion in stricture—or from behind it—to the general results of stricture, is unquestionably of great importance. The rapidity with which many constitutional symptoms disappear after cure of deep strictures, is thus easily explained. Urethral chill, following instrumentation, is also explicable in the same way in some cases.

The possibility of mixed infection must be taken into consideration. The cases of cystitis, epididymitis, peri-urethral phlegmon, pyelo-nephritis and other special phenomena secondary to stricture, are not all dependent upon direct extension of inflammation, but are probably due in many cases to secondary infection. A recent case of my own is strongly suggestive in this regard. A patient whom I was treating for several irritable strictures of comparatively large caliber, developed multiple nephritic and perinephritic abscesses during the course of the treatment. An interesting point was the fact that the formation of the abscesses was heralded by great increase of irritability and spasm in the deep urethra.

The point which I desire to urge most strongly is the apparent fact that all patients with serious strictures—particularly of the deep urethra—suffer from a greater or less degree of toxæmia, and that many cases develop secondary infections of one kind or another.

That the passage of instruments may precipitate toxæmia is granted. The danger is enhanced by uncleanliness, but strictly aseptic instruments may cause trouble. It is a question, however, whether any instrument passed through a diseased anterior urethra, can be aseptic by the time it reaches the deeper portions of the

canal. It is my firm conviction that strictly aseptic surgery of the urethra would demand a flushing out of the canal prior to the introduction of even an ordinary sound. This we know, is not ordinarily done, nor is it always practicable. We are, most of us, therefore, committing cardinal sins from the standpoint of aseptic surgery, as a matter of routine.

Treatment of Stricture.—The treatment of stricture of the urethra has given rise to more contention and more radically opposed views than almost any surgical disease that could be mentioned. One faction never cuts, another always cuts, and still another causes organic stricture to fade into the misty past by the use of "electrolysis" alone.

As is usually the case under such circumstances of contention, the philosophical surgeon will occupy the middle ground. The best reply that can be made to the extravagant claims of the urethrotomist and the still more extravagant claims of the electrolytic crank, is that, "there are strictures and strictures." To some of the so-called conservatists, it would be foolish to reply—the differentiation of strictures is a matter beyond their comprehension. They cling to the traditions of the past with a fatuity and obtuseness which an axe might possibly impress, but argument, never. There is a vast difference between judicious conservatism and the cowardice and ignorance that often masquerades as conservatism.

It will be impossible for me to discuss the subject of treatment in a comprehensive manner, in this paper, but, with your kind indulgence, I will attempt to present a few practical points.

Dilatation of Stricture.—By dilatation we mean gradual and intermittent dilatation. Continuous dilatation, excepting with soft instruments as a preliminary to gradual dilatation, is out of date.

Selection of Cases.—I believe that every soft and tractable stricture should be treated by dilatation. Even admitting that urethrotomy is, in many cases, a radical cure, it is far better, in my opinion, for a man to be enslaved to the sound for the rest of his days if by so doing he can avoid the dangers of an operation, and at the same time receive satisfactory relief from his symptoms.

The majority of deep strictures will yield to dilatation, especially if all obstructions and points of friction and irritation be primarily removed from the pendulous portion of the canal. If such points exist, attempts at dilatation of the deep stricture only makes matters worse.

It has been my experience that strictures of the pendulous urethra are rarely soft and tractable. They are generally irritable and resilient, and the more they are stretched the worse they get, and the more irritable the deep urethra—which is, perhaps, free from local disease—becomes.

It is possible to distinguish on the first examination, as a rule, those strictures of the pendulous portion which are likely to yield to dilatation. These, unfortunately, are rare. The nearer the stricture is to the meatus the less likely it is to yield to dilatation. Points of relative inelasticity will never yield to dilatation.

Frequency of Dilatation.—My experience goes to show that the majority of surgeons dilate at too frequent intervals. Here is a prime necessity for the selection of cases. Each stricture is a law unto itself. Some cases yield best to dilatation every third day. I have seen cases in which bi-weekly operations gave the best results. Many strictures are tortured into irritability and resiliency. A few weeks' rest sometimes obviates the necessity of urethrotomy. It is hardly necessary to repeat the old maxim that gentleness is the key-note of success in the treatment by dilatation. *Western Medical Reporter.*

Go to Egypt if You Want Children.—Dr. Lesseps once stated that all the conquerors of Egypt, from the Hyksos down, had been compelled to loose their clutch on that country because they failed to reproduce their race while in it. This may apply to the French, whose reproductive powers appear to be failing, even in their native land; but it does not affect the English. Indeed, the truth seems to be quite the contrary; for so prolific has the Anglo-Saxon proved in Egypt, that childless couples are now recommended to visit the Nile valley. In one case, says the *British Medical Journal*, a bride of 20 years' standing, presented her lord with their first child while sojourning at Assonan, in the extreme south of Egypt.

Our readers who may be contemplating a wedding trip should note this fact, and take in the land of the sphinx, or avoid it, as their calculations render most advisable.

The Times and Register

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WM. F. WAUGH, A.M., M.D., Managing Editor.

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SPECIALTY DEGREES.

THE University of Edinburgh now confers diplomas in the specialties, on its own graduates, who take special courses of instruction. We will soon begin to see a strange and mysterious string of letters and abbreviations following the modest M.D.; such as Ch.M., Ophth.M., Mid.D., Gyn.D., Lar. et Aur. et Nas. et Rect. et Derm. et Pneu. et Umb., etc., etc. Nevertheless, it will be an added incentive to students attending the college that grants such degrees; and will assist in rendering the school popular. And if the Scottish school allows graduates of other colleges to compete for these honorable degrees, we will see a host of ambitious specialists slipping over to Scotland for a six-weeks' course, and returning to sport their new degrees.

Just why our brisk and business-like post-graduate schools have not adopted this feature it is difficult to see. It would *draw* and *pay*, and there is no good reason why a man who earns a title in a specialty to which he intends to devote himself should not get it.

A PLEA FOR CHEAP AND NASTY MEDICAL "EDUCATION."

A MEDICAL night school has been started in Chicago, and soon there will be a crop of physicians graduated who otherwise might be doing night work on vehicles arranged for other than medical relief.

Prices of professorships in other "colleges" range from $100 up to $2,500. The advantage to the professors consists in their being enabled to advise the matriculated jays to bring cases to the faculty. The night school mentioned publishes a cordial invitation for the public to attend the lectures.

Notwithstanding the apparent degradation all this implies for medical instruction, its outcome will be beneficial in the end, for physiology and medical matters in general are so culpably ignored in the common schools that the public pours its money into the quack's coffers through ignorance of what constitutes medical learning.

It is time the rabble was allowed to prey upon itself, and quacks treat quacks through every one being enabled to set up as a doctor. Eventually the rudiments of medicine will be familiar to all, the stable boy, the chamber-maid, the hod-carrier and scullion, who will wrangle over specifics for cancer and consumption, and sell one another sure cures for everything from inebriety to jealousy. The resulting slaughter will be equal to turning loose the fool killer, and there will dawn a millenium when newspapers will not publish patent medicine or quack advertisements, druggists will not vend nostrums, and every one having a smattering of medical information will mistrust the one who knows only as much as he does.

When all are doctors, the doctissimus alone can get shekels enough to live upon. As it is, higher learning is not recognized as such. The cheap and nasty medical school will soon remedy existing evils, and an illustration will be afforded of the tendency of sociological errors to the corrected in most unexpected ways.

S. V. C.

GONORRHŒA.

IN the present number we have brought together an abstract of the latest writings by the best authorities, upon the treatment of gonorrhœa. Much more could be said, especially on the subject of chronic gonorrhœa; but this could not be embraced in the limits of a single number. Perhaps at some future time we will send out a special number devoted to the treatment of gleet.

We have now in preparation, another special "Typhoid Number," as the last has been already exhausted, and we are receiving, daily, applications for copies. Will our readers send us notes of interesting cases, and especially of their experience in the various methods employed in the treatment of this disease?

QUARANTINE INFECTIOUS DISEASE.

THE Philadelphia Board of Health has recently instituted a new method of dealing with infectious disease. Heretofore, the medical inspector visited the house, and instructed the family as to the proper precautions to be observed. In many cases the mother hears the lesson, and promises to comply, and then in the usual way of women, forgets all about it; while the neighbor women bring in their babies to have a little social talk in the sick room. This is especially the case with the lower class of foreigners. But now, when ever it is evident that the sanitary precautions are not comprehended, or will not be obeyed, the house is placed under quarantine, and put in charge of a watchman. The moral effect of this upon the whole neighborhood is most excellent. The realities of hygiene, the necessities of its teachings, are brought home to the consciousness of the most illiterate child of Abraham. Cleanliness, isolation, disinfection, are no longer meaningless to his benighted intellect. And with this powerful lever he is pried out of the slough of fatalism, of the childish waiting for a higher power to do for him what he should do for himself.

J. F. JAMES proposes (*Science*) to destroy mosquitoes by kerosene. He pours four ounces of the fluid on the surface of a pool of water measuring about sixty square feet. The pool had been teeming with animal life, but for the next ten days no living insects were observed. A count then showed on the surface 7,400 insects, of which 370 were mosquitoes.

THE *Hospital Gazette* says that the new edict *in re* the sale of stamped medicine packages is playing the mischief with the nostrums. The act forbids the sale from wagons of such articles. Sequah, Limited, is no longer a mine of wealth, and the medical men who invested surreptitiously in its shares stand a fair chance of receiving a rich return in experience for their vanished shekels. Men who so far forget the duty they owe to the profession and to the public as to assist in bolstering up these rascally enterprises ought to lose, and no sympathy need be wasted upon them.

Letters to the Editor.

GONORRHŒA IN THE ARMY.

DURING the last twenty years I have had but a limited practice in gonorrhœa, not desiring to have much to do with it. However, a statement of my treatment of it while I was an army surgeon may be of some interest. The purveyor failing to honor requisitions for the usual balsams, nitrous ether, etc., I administered in lieu of the regular formulas a mixture of sod. bicarb., or potass. chlor., made up with spirits of turpentine and tinc. opii into an emulsion. The treatment was effective. Of course I saw but very few cases in the first stages of the disease. No attempts were made to abort, and no syringes were prescribed, as the army medicine chest had them not. Whether many or any of these cases were of the bastard variety I should not like to say. I am persuaded, however, that every man who took the disease did so under circumstances the most favorable for acquiring a "genuine Confederate clap."

GONORRHŒA.

IN our marine hospitals forty years ago it was the custom to treat this disease with injections of nitrate of silver. Acute cases were sought to be aborted with a 10-grain solution. The treatment was very severe, and often drove the inflammation to the deeper tissues, thereby producing stricture.

In my practice I very rarely resort to harsh measures, and only where the acuteness of the disease requires it. In such cases, where the inflammation has removed in the fanlike folds of the first inch, I have opened these folds by a urethral fenestrated speculum, and having cleaned the surface, have applied fuming nitric acid to the fold for an instant, and then followed with water to dilute the acid to a mere astringent. The severity is only momentary, and the increase or spread of inflammatory action is not so likely to occur as from the application of argent nitrate. In these special cases, some that defied all other treatment, were speedily cured. I prescribed milk with sod. bicarb. to render the urine copious and alkaline. Bromide of potass., and the carb. of potass. combined, can be given in the milk to produce even better results. Flaxseed tea, or other mucilaginous drinks, with the alkalies, are in order. Opium and camphor for extreme scalding and chordee, and sedatives have their place. The bowels should be kept well open. When injections are used in the first few days, those which are soothing and cleansing are to be preferred. There should be frequent bathing, if not packing the organ in water as hot as can be borne, and even hot fomentations to the perineum. After the first few days copaiba in comp. syrup of sarsaparilla, with or without bromide, or carbonate of potash, or the usual form of gonorrhœal pills, or the oil of sandal wood can be given. The judicious use of injections of an astringent and germicidal order will be found most beneficial. The following has served me well:

℞.—Bismuthi subnit..... ʒss–j.
Glycerine..... ʒij–iij.
Aquæ camphor..... ʒj–iss.
M.

Carbolic acid can be added in strength suitable to the condition of the case. Exercise, some care not to get up and deposit too much bismuth, lest it should partially obstruct urination. Here is another formula:

℞.—Pulv. alum.,
Zinci sulph.....āā grs. xv–℈j.
Acid carboli..... gtt. x–xv.
Aquæ camph. vel. paries..... ʒvj.
M.—Inject a couple syringefuls three times a day after urination.

In the unusually protracted cases, I should suspect stricture, or places of deeper inflammation, and use the bougie. Cases which, for months, defied other means, have yielded promptly on dilatation. This line of treatment, judiciously varied, ensures a reasonably early cure, and is not liable to lead to stricture or to orchitis.

ELISHA CHENERY, M.D.
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SPECIFIC URETHRITIS.

WHAT I have to say pertains to specific urethritis and not to its complications or sequelæ, although *en passant*, in the care of these, this plan of work (which follows) offers material help to the surgeon, and will cause these not infrequent consequences of urethritis to be of rare occurrence.

In the attempted sterilization of the urethra, the entire penis is well scrubbed, paying especial attention to the part beneath the prepuce. An irrigator attached to a ball syringe is passed well back into the urethra. The fluid used is: First, an alkaline solution, soda bicarb. ʒj to one pint of boiled water; second, while any antiseptic or germicide may be used —a solution of pyoktanin. For washing out the urethra, the surgeon, by intermitting pressure about the meatus, will distend and flush the canal. The distension of the canal, so that all the folds of the membrane may be effaced, I regard as important. The penis is stripped with a clean napkin to remove the excess of moisture. The patient lies down, and the surgeon with the powder applicator, thoroughly packs the urethra from the membraneous portion to the meatus with C. P., in palpable boric acid, which is also liberally sprinkled over the glans, and the latter well covered with absorbent sterilized cotton. A free serous secretion follows, which dissolves and washes away the acid in about three hours. The outcome of this course of treatment is a cure in about thirty-six hours. Of course, laxatives and a bland diet, anodynes or febricides are exhibited, according to the needs of the case.

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GONORRHŒA.

OF late years I have had only a few cases. In one I gave acid boracic 3ss, glycerine 3jss. After patient passed water I introduced soft catheter well into the urethra, and injected the foregoing. On withdrawing the catheter the glycerine and acid were stripped out into the urethra. Cotton was used to absorb any excess of the medicine. The discharges notably decreased after each injection, which was given about once each day. When discharges nearly ceased, direct application was stopped and the oil of sandal wood administered. The patient's improvement was rapid.

J. J. PAUL, M.D.

SELRINGVILLE, ONT.

Book Notices.

TEXT-BOOK OF OPHTHALMOLOGY. By DR. ERNEST FUCHS, Professor of Ophthalmology in the University of Vienna. Authorized translation from the second enlarged and improved German edition by A. DUANE, M.D., Assistant Surgeon, Ophthalmic and Aural Institute, New York. D. Appleton & Co. Price, cloth, $5.00; sheep, 6.00.

Since the time of Dr. Franz Cornelius Donders, there has been, probably, no more valuable contribution to this department of medical science than that of Prof. Ernest Fuchs.

The various diseases of the eye are treated of under appropriate headings, and require fifteen chapters, covering six hundred pages for their elucidation. As far as we can perceive, this part of the work has been exhaustively performed. The second part, consisting of six chapters, of one hundred pages, is devoted to anomalies of refraction and accommodation. The third part treats of the surgical operations.

The translator, Dr. A. Duane, has added a valuable appendix, treating of the instruments used in ophthalmology. The work is thoroughly indexed, the illustrations numerous and well executed, and the typography is, in every respect, worthy of the house of D. Appleton & Co.

HAND-BOOK OF EMERGENCIES AND COMMON AILMENTS. Explaining the latest approved treatment of injuries, sudden and painful attacks, poisoning, and many common diseases. By E. F. BRADFORD, assisted by LOUIS LEWIS, one of the editors of THE (MEDICAL) TIMES AND REGISTER, Philadelphia. Sold by subscription only. Boston: B. B. Russell.

This work, a sort of *omnium gatherum*, is well worthy of perusal even by the physician. Written for the family and popular use, it contains a mass of information, useful in emergencies, well classified topically, in the five parts of the volume. Part first is introductory; part second treats of injuries, wounds, artificial respiration; part third, sudded attacks, painful attacks; part fourth, common ailments, diseases of the skin; part fifth, diseases of infancy and childhood. The work, while conveying valuable knowledge for the uses of the public, is also enlivened by a literary and witty style in the presentation of the various facts. The faith curers, cancer salvers, quacks and medical charlatans are, in fact, very humorously portrayed. To mention but one of the delightful quotations, is that where Don Quixote gives directions as to his restoration to complete vitality in case he should unfortunately get cut in half in any affray, and that was to place the two halves of his body together, taking care to fit them exactly, and using at the same time some wonderful salve to cement or glue them firmly. The book has a number of wood cuts, showing methods of bandaging, the treatment of drowned persons, etc., and also of Dr. Morton, the discoverer of anæsthesia, and of Louis Pasteur. A list of medical terms is appended, as also an index.

DISEASES OF THE KIDNEYS AND BLADDER. By W. F. MCNUTT. Philadelphia: J. B. Lippincott Co., 1892. Price, cloth, $2.50.

This compact and moderate-size octavo is based upon the notes of his lectures delivered by the author before the medical students of the University of California. It comprises about 250 pages of well-printed matter, on good paper. We have no doubt the treatise will be found very useful as containing information, in summary, up to date. It has eighteen woodcuts and an index.

A MANUAL OF PHYSICS. By WILLIAM PEDDIE, of The University of Edinburgh. G. P. Putnam's Sons, New York, 1892.

This very compact handbook of physics, based upon the works of Von Helmholtz, Maxwell, Thompson, Tait, and others, is a desideratum, in this department of science, much needed, and bringing apparently the various facts up to date, al-

though we miss the name of the brilliant young Montenegrin, who has lately distinguished himself in the domain of electricity, from the index. The work seems a perfect *vade mecum*. The thirty-three chapters are filled with every information requisite, conservation, transformation, and degradation of matter and energy constituting the foreground. The 500 pages of matter are clearly printed in medium small type and on good paper.

The Medical Digest.

RED BILBERRY (*Vaccinium vitis idæa*) IN ARTICULAR RHEUMATISM.—The red bilberry is a popular remedy in Siberia for rheumatism. Smirnoff (*Rép. de Pharm.*, July 10, 1892,) reports excellent results from decoctions of the whole plant, in doses of 30 to 60 grammes to a pint of water. This drink should be taken for three months steadily. It is especially efficacious where salicylates, iodides, and antipyrin fail.

TREATMENT OF GONORRHŒA BY INJECTIONS OF POTASSIUM PERMANGANATE.—Professor August Reverdin describes, in the *Revue Medical de la Suisse Romande*, a method of treating gonorrhœa, at any stage, with potassium permanganate. He takes an ordinary catheter, which he attaches to the delivery tube of a gravity syringe, which latter is full of the permanganate solution, and inserts it deeply into the urethra. The patient is made to grasp the glans with both hands, the thumbs being placed on either side and the current is turned on. The liquid fills the urethra and then easily flows out again, provided the catheter has not been greased. It is best, therefore, to use a new catheter, and never permit grease of any description to touch it. Sometimes the liquid will penetrate the bladder, but aside from causing a smarting sensation of more or less severity, according to the strength of the solution, does no harm. Three pints of the liquid are used at each injection. The latter should be of the temperature of the body, and usually not stronger than 1 part of permanganate to 5,000. One, or at most two, injections per diem are given. The cure usually occupies fifteen days, but the running usually ceases at the end of the third day.—*Med. Review.*

UNCURED GONORRHŒA.—When Van Buren, twenty years ago, declared that more people die of gonorrhœa than do of syphilis, and Nöggerath, following him, said that a man never recovers from a clap, and that nine-tenths of the women who marry men who have had gonorrhœa become subjects of painful and incurable inflammatory diseases of the uterus, tubes, or ovaries, every one scoffed. It is not my purpose to weary you with a recital of the therapeutic measures innumerable, old and new, radical and palliative, that have "had their day and passed away." I am neither prepared to launch a new specific nor to announce my alignment in innocuous desuetude with the stoical school of palliators. What I wish is to call attention to some of the conditions that are responsible for its always obstinacy, its oftentimes incurability.

Gonorrhœa is a dual infection; streptococci and diplococci are always present in every typical case. The facts, that the former without a phagocyte environment may and do go everywhere, and that the latter do not penetrate the submucosa, but love the cylinder epithelium, are as nothing arrayed against the clinical fact that a man, once the victim of an obstinate clap, may perhaps never be said to be absolutely free of that slumbering essence of disease that excesses of various kinds may quite likely awaken to a dangerous activity. Allowing for argument's sake that the surface-loving gonococcus is alone responsible for a contagious urethritis, a moment's study of the arrangement of that canal will serve to show how far all present local measures must fall short in efforts at its eradication. From the fossa navicularis to the sphincter vesicæ interna waypaths and pitfalls innumerable present themselves. All along the spongy tract are the narrow sinuses of Morgagni, some nearly an inch long, studded throughout their whole extent with the racemose follicles of Littré, hidden away in mucosal folds that the most permeating injection may never hope to flush. Confined to this portion alone, the disease but too often baffles for months our best endeavor. Yet here, least of all, is the malady to be dreaded, as here, as long as it exists, does it manifest its presence by the visible signs. It was a happy thought on the part of some man of Saxon bent who attacked that array of high-sounding terms, ejaculators, accelerators, detru-

sors, etc., and boiled them down into the expressive commonplace, "the cut-off," while hardly less valuable was the introduction by some German, I think Ultzmann, of the demonstrative glass test, in the study of clap behind the cut-off, of posterior urethritis. The revolution that this simple expedient has worked has killed the "bad cold" analogy, and placed in the hands of the victim a ready refutation of the claims of that doctor who can "cure any case of gonorrhœa in from two to ten days." Once instructed in what a posterior urethritis is, and what the cut-off muscle does, the unfortunate youth of to-day, with sorrowful eyes and sinking heart, gazes each morning on the *tripper fäden* in the tell-tale bottle, and knows full well that while the running may have ceased, the enemy still holds the inner forts, and that the end is yet far from being reached.

If the racemose follicles in the pits of Morgagni are a reason for obstinacy in an anterior urethritis, how much more numerous are the pitfalls deeper in. What injection can we hope to carry from the urethra through narrow ducts an inch long into the complex glands of Cowper; or who that realizes the muscularity of prostatic tissue can hope to surely overcome by wash or drop, however deftly applied, the grasp these fibers exert on the necks of this organ's many mucous flasks? From the sinus pocularis as its rallying point, who may successfully follow with local measures the invading army as it files its forces down the straight and narrow deferens, or deploys its legions along the devious pathways of the seminal sacs? Whichever way the eye of the anatomist turns as he studies these deeper parts, the territory presents but impregnable fortresses, where the enemy may intrench himself and live forever on the milk and honey of his adopted land. It is not as a rule in the bladder, the ureters, or even the kidneys that the surgeon need lose heart in doing battle with the disease. In these parts the open field, the ready means of access with curative agents, both local and general, encourage him to a successful issue; but once the disease is domiciled in the seminal appendages, the outlook is indeed far from encouraging. Too much stress is laid on the part the prostate plays in deep, uncured urethritis, and that here more than anywhere else in these parts may we dare to use, with some reason for anticipating good results, the powerful silver drop. If more deep chronic claps were prostatic, more cures would be recorded. The other seminal appendages, and of these probably in chief the seminal vesicles, offer almost insuperable obstacles to medication of any sort, and I rather wonder that more is not said of pyo-seminales as an analogue of pyo-salpinx. A more general exercise of the autopsy test would, I am sure, bear out the truth of this idea.

Failing to cure by local measures, we have recourse to the various vaunted internal remedies, whose mode of action through blood and urine is not only of a diffused and roundabout character, but, as regards certainly a large number of the agents in common use, of questionable specific value.

When may one who has a chronic posterior urethritis safely marry? This is a question too grave and too far-reaching for me to attempt to answer. One authority has said, not as long as a single pus cell or flocculus can, after repeated examinations, be found in the urine, while another, equally eminent, recommends marriage as a cure for gleet. I leave this part of my subject for you to discuss.

A few words about uncured gonorrhœa in the female. Ricord said that when old man Weller advised Sam to "beware of the vidders" he had in painful recollection the claps that in his younger days he had caught from that source. Be that as it may, who can surely say when a woman is cured of a clap, or what is perhaps of more importance, who can declare by any means at his command that a suspected woman is free of the disease? How commonly is gonorrhœa contracted by some one from a subject who declares herself innocent of the disease, and points to a healthy vagina and frequent harmless congress with other men in proof of her claim! How often does the one child mother with her history of pelvic phlegmon and her painful, fixed, and deflected womb demonstrate the invasion of the deeper organs by an old specific vaginitis through os and cervix made patulous by her parturition! Again and again have I expressed with a bivalve speculum through an apparently normal os into a pale, cool, dry vagina, a quantity of muco-purulent matter of specific character. Who, then, can tell of the possibilities of infection that lurk still further up in womb and append-

ages? It is not even necessary, as in the case of the male, to conjure up a relighting of anterior inflammation, for may not each menstruation serve as an agency to bring down the lurking virus for man's infection? Here, more than in any other way, to my mind, is found explanation of the commonly recognized danger of infection by sexual congress during the molimen. Surely, something more than menstrual blood and a crumbling, but normal, endometrium must be looked to for the cause of this not infrequent catastrophe. In conclusion, let me say, as of the women even more than of the men, gonorrhœa is fraught with decidedly more danger than is syphilis.

—Dr. E. R. Palmer, in the *American Pract. and News*

Dr. Goldenberg's Treatment of Acute and Chronic Gonorrhœa.—1.—*Acute Gonorrhœa.*—Assuming that gonococci are the etiological factors of gonorrhœa, and that early in the disease they occupy a more superficial, and, consequently, a more accessible portion of the mucous membrane, Dr. Goldenberg begins local treatment as soon as the first subjective symptoms of disease become manifest.

After preliminary micturition, a soft bulb-ended catheter, having four return-flow apertures, is introduced 1 to 1½ inches deep in the urethra. Through this instrument, the diseased urethra is irrigated with a warm 1-30,000–1-20,000 sublimate, or a 1-2,000–1-1,000 silver nitrate or permanganate of potassium solution. After a little while the catheter is introduced further back, and finally it is pushed to the bulb, irrigation being kept up all the time. This procedure (which is repeated daily) thoroughly cleanses the anterior urethra; the compressor urethræ muscle preventing the fluid from reaching the posterior urethra. This treatment prevents the disease from spreading into the posterior urethra, and frequently effects a cure in ten or twelve days. Should, however, the posterior urethra become diseased, the treatment is still applicable. Only in this case, after having ordered the patient to urinate, and after having preliminarily irrigated his anterior urethra, we push the catheter beyond the compressor urethræ, and, under moderate pressure, inject 300 cc. of silver nitrate, or potassium permanganate solution (of the above-mentioned strength) into the bladder. The catheter is now withdrawn, and the patient told to empty his bladder.

2. *Chronic Gonorrhœa.*—The treatment of chronic gonorrhœa must be guided by a knowledge of the character and the locality of the urethral inflammation. We obtain this knowledge by examination of the urine, by the use of the olive-pointed sound, and by the endoscope. In examining the urine, proceed as follows: Irrigate the anterior urethra. If the water returns turbid, we know that the anterior urethra is affected. After this irrigation, have the patient urinate first into one and then into another glass. If only the first glass contains urine which is turbid and full of shreds, we know that the posterior urethra is diseased and the bladder is healthy. If the contents of both glasses are turbid, there is cystitis, or gonorrhœa of posterior urethra, according as the second or first glass is the more turbid. If, besides shreds, we find turbidity of the urine, we know that there is diffused catarrhal inflammation of the affected portion of the urethra. Shreds in clear urine, show circumscribed patches and "plaques" of inflammation.

In diffuse chronic gonorrhœa, irrigate with 1-1,000 permanganate or 1-1,000–1-500 silver solution. Alternate with this, ¼–2 per cent. of silver, 1–2 per cent. of copper, or 2–4 per cent. thallin solution, applied by means of Ultzmann's syringe or a Gschirrhakl's brush. In these cases do not have the patient empty his bladder, as the urine in the bladder will serve to dilute and render non irritating any of the instilled solutions, which may reach the bladder. When the chronic inflammation exists in circumscribed patches, it is best to apply, through the endoscope, strong applications to the diseased parts. Should, however, the patient be very sensitive, dispense with the endoscope in treatment of the posterior urethra. Instead, apply silver, copper, thallin or iodine solutions by means of the syringe or brush. The strength of these solutions is determined by the sensitiveness of the patient and the extent of the lesions. Weak silver solutions (up to 5 per cent.) are just as effective and less irritating than the strong ones used formerly. In trachomaform disease and marked granulations, apply trichloracetic acid by means of Dr. Gleitsmann's instrument.

When the submucous tissue is much affected, use the bougie and massage. As topical agents tinct. iodine is to be preferred, pure or mixed, with equal parts of tinct. gallarum, or 2–5 per cent. solution of iodine, with potass. iod. in glycerine solution.

Sounds should not, as a rule, exceed 26 Fr. in size, and should be lubricated in boro-glycerine solution.

—*N. Y. Med. Monatschrift.*

TREATMENT OF STOMACH DISEASES.—Hemme describes some elaborate researches into the therapeutic effects of (1) orexin, (2) hydrochloric acid with pepsin, (3) alkali with pancreatic preparation, (4) guaiacol, and (5) pepper. The investigation was carried out in respect to (1) improvement of appetite, (2) changes in the gastric juice and its digestive properties, and (3) the appearance of the characteristic reaction with saliva when fibrin capsules containing potassic iodide were taken into the stomach, thus showing the energy and rapidity of gastric digestion. To ascertain the changes in the gastric juice and its digestive properties, the stomach tube was used in the morning. If there was gastric retention, the contents were examined, and the stomach washed out. Then a test meal was given, and in from forty-five minutes to an hour the stomach contents were withdrawn and examined for free hydrochloric acid, lactic acid, and degree of acidity. The digestive properties were also tested with the gastric juice alone, or after the addition of the above-named agents. The most important results were obtained with guaiacol, especially in cases of phthisis. The appetite was very considerably and permanently improved. No definite change in the gastric juice was made out, yet at times the acidity of the gastric contents was increased. It was doubtful whether the result was due to the antiseptic action of the guaiacol. As regards orexin, any increase in the appetite was rarely observed. The acidity of the gastric juice and the motor activity of the stomach were in most cases increased, these results being due to the stimulating action of the drug on the gastric mucous membrane. The orexin was given in doses of 0.2 to 0.6 g. with plenty of fluid. The therapeutic effects in the case of the other agents was either absent or but slightly marked.

—*British Medical Journal.*

TREATMENT OF GONORRHŒA.—There are few names better known in connection with gonorrhœa than that of Neisser, and it was fitting that he should introduce the subject of the rational treatment of the disease at the Dermatological Congress. In opening the discussion that followed, Dr. Neisser put forward a number of theses that should form points for discussion.

1. That the spread and importance of gonorrhœal diseases in men, and especially in women, is so great that every care should be taken that a rational method of treating it should be the common property of every surgeon—and not of specialists only—and for a rational prophylaxis which should not be limited to syphilis only.

2. The basis of all prophylactic and therapeutic measures is the recognition of the gonococcus as the cause of the infection and the possibility of recognizing the presence and the seat of the disease at every stage of it. The diagnosis it is impossible to determine in many acute, in all subacute and chronic cases, without microscopic examinations of the mucous secretions. Macroscopic inspection alone, and especially in women, is completely valueless. The search for gonococci must, in the majority of cases, be limited to a microscopic examination. This carried out with sufficient frequency almost always renders a certain diagnosis possible. The culture process will be reserved for rare cases.

3. The danger of gonorrhœa consists in (1) the gonorrhœal virus not remaining confined to the spot first infected, but (*a*) in man, the posterior part of the urethra and the spermatic cord and the epididymis are attacked and are not readily accessible to treatment, and complication may arise in respect to the prostate, bladder, etc., and (*b*) in woman the uterus, tubes, ovaries, and the peritoneal covering may be attacked, and (2) that the gonorrhœal virus in the later stage penetrates the deeper epithelial layers.

By the spread in both directions superficially and deeply, the virus may remain for months and years in inaccessible places, and it may form a chronic source of infection. Thus it is only in the early stages that the virus is in such accessible places as the anterior part of the urethra in man, the urethra and cervix uteri in women, that it can be treated by the patient him-

self. The treatment of gonorrhœa should be such that a urethritis anterior should not become a urethritis posterior, that an acute gonorrhœa should not become chronic. Its institution should follow as soon as possible after the infection, but only under the following conditions:

4. Only such medicaments should be made use of as (*a*) kill the gonococci, (*b*) that more quickly overcome the inflammation, (*c*) do not damage the mucous membrane.

℞.—Argent, 1 : 4,000—1 : 2,000;
Ammon. sulphoichthyol, 1 : 100
Weak Rotter's pastilles, free from carbolic acid, and
Sublimate, 1 pastille to 250 of water;
" 1 : 30,000—1 : 20,000.

Unsuitable remedies are: Simple astringent injections. (In this case, danger of the virus being introduced by the injection.) Caustic solutions of greater concentration (danger of formation of strictures); further, most mechanical methods of treatment, such as endoscopy and bougies.

5. The best method of carrying out the early antibacterial treatment is frequent irrigation of the urethra, so as to get at all the large folds of urethral mucous membrane as much as possible. In man, the irrigation is best carried out with a well-constructed syringe. In women, mechanical methods are to be used, wiping out of the urethra and cervix along with washings out and injections. Treatment by internal medicine is superfluous. All general, hygienic, and dietetic, as well as all local antiphlogistical measures, are useful, and to be carried out as far as possible.

6. In all cases not quite acute, it must be determined whether a urethritis posterior already exists, and whether gonococci are to be found in the secretion. It is only in case they are present that this early posterior urethritis is to be treated locally.

7. The duration of the treatment is not to be measured by the frequently early momentary improvement, it must be continued for long, even if in a milder form, not rapidity, but certainty of result, is the essential aim of our therapeutics.

8. The treatment of so-called chronic gonorrhœa is subject to the determination, whether in man or woman, the disease is gonorrhœa or not.

9. If gonorrhœal virus is present in man in the posterior or anterior part of the urethra its destruction is best compassed by irrigation, or Guyon's instillation. If the chronic urethritis is not of a gonorrhœal character the treatment to be instituted will depend on the pathological anatomical changes in the mucosa or submucosa. In most cases the affection is so unimportant that I content myself at most with irrigations or instillations, generally, however, dissuade from further treatment. Deeper changes of mucous membrane must be accurately localized (sound, endoscope), and require energetic treatment (dilatation, massage, caustics).

10. The treatment of gonorrhœa in women is far more difficult than in men. Without steadily continued microscopical examination an opinion as to the results of treatment is impossible. The treatment of recent urethral and cervical gonorrhœa must be begun as early and as energetically as possible, as the closely following uterine, tubal, ovarian, and peritoneal infection can only be treated with the greatest difficulty, and without any prospect of any good result. Very frequently serious operations are the only means of treatment.

11. The frequent occurrence and treatment of gonorrhœa of the rectum demand more attention than they have hitherto received, as gonorrhœal infection of the rectum appears to be the starting point of many ulcers of the rectum.

Dr. Ehrmann, of Vienna, had introduced pus from an unopened periurethral abscess into a blind sac of mucous membrane in a healthy hypospadias without obtaining any result. The introduction of the same pus into the urethra of the same individual only caused a slighf follicular inflammation that disappeared in a few days. From these experiments he was led to the belief that many complications were not due to the gonococcus, but to a mixed infection. He found ichthyol very useful in the treatment of gonorrhœal complications.

Hr. Lang, Vienna, agreed with Neisser's theses. Therapeutically he recommended thin rubber tubes coated with a gelatine containing the desired remedy.

Hr. Welander, Stockholm, recommended scratching of the external layer of mucous membrane in the anterior part of the urethra, especially of the fossa navicularis by means of a probe armed with

cotton, and then injecting a 2 to 3 per cent. solution of arg. nit. He had never seen any harm arise from the practice.

Hr. Finger, Vienna, said that only solutions of 5 per cent. of arg. nit. penetrated the layer of mucous membrane. Weaker ones were of no use.

Hr. Staub, Posen, had frequently noted cases of rectal gonorrhœa in women. He had frequently found gonococci in pus from the anus.

Hr. Lewin, Berlin, remarked that even one-half per cent. solutions of arg. nit. should be considered concentrated, for as such they precipitated albumen, and thus preventing penetration to deeper layers; it was different however, with Neisser's 1 : 4,000 to 1 : 2,000. In these weak solutions esmotic action came into play, and the fluid was absorbed by the deeper layers without precipitation of the superficial albumen. He did not think internal treatment should be summarily rejected, as it had been proven that certain bodies by splitting up in the bladder could cause an antiseptic action.

Hr. Neisser acknowledged that in mixed affections the staphylococcus played a part, but showed that periurethral abscesses could be set up by the gonococcus alone. Both albuminate of silver and chloride of silver possessed anti-bacterial properties. Strong solutions of lapis often give good results, but the danger and difficulties of them stood in the way of their general use. The effect of internal treatment, even of copaiba which was the most powerful, was only very slight.

—*English Ex.*

Some Modifications of Thiersch's Method of Skin Grafting.—Having, in a varied experience with Thiersch's method of skin-grafting, obtained uniformly successful results, while modifying, as it seems to me, advantageously, some of the details of the operation, I am led to ask the favor of a short space in the *Journal*, in which to refer to them, in the hope that the operation may thereby be made simpler for those who are beginning to practice it.

Assuming that Thiersch's rules are familiar to the reader, I only wish to mention the following modifications as adopted by me :

1. The substitution of a 4 per cent. boracic acid solution for the sterilized salt solution, both during the operation and in the subsequent dressings, if wet dressings be used.

2. Instead of the frequently repeated moistenings of the grafted surface and the dressings, it is sufficient to wet the gauze dressings once in twenty-four or forty-eight hours with the boracic acid solution; the gauze dressing being covered over outside by a rubber or gutta-percha tissue.

3. If the dressing remains odorless it need not be removed until at the end of from four to six days after its first application.

4. Perfectly successful immediate results may be obtained under the use of *dry* sterilized dressings—healing taking place under one dressing. (This plan I have not tried, however, sufficiently often to be able to say, from personal observation, if the good results are as invariable as under the wet dressings, or if the skin of the newly-healed surface is as sound ultimately.)

5. It is unnecessary to curette the surface to be grafted, *provided it be covered by healthy, fresh, red, flat* granulation tissue. This omission saves the time which is required to still the bleeding which follows curetting.

6. Where, under a reverse condition of the exposed surface, curetting *has* been done, the application of an Esmarch bandage and tourniquet, when possible, and the leaving of the latter in place for from one-half an hour to an hour, after the operation has been completed (as proposed by Dr. McBurney), is of decided advantage.

7. It is not necessary to the success of the operation that the whole of the exposed surface should be covered with grafts at one time. The patient may be in too exhausted a condition to allow of the prolonged etherization necessary to cover an extensive area; if so, there need be no anxiety as to the result if but a portion only of the surface be grafted at one time.

I have not used the devices of Dr. McBurney or Dr. Mixter for stretching the skin from which the grafts are to be taken, but they are highly spoken of by those who have done so. In default of these, the use of rough gloves which have been sterilized, as proposed by Dr. Dunham, of New York, in a recent number of the *Post-Graduate*, recommends itself as being admirable for this purpose, and like all other means for saving time

in the operation their use is very desirable, as allowing of the more rapid cutting of large grafts.

In other respects than those mentioned, the directions of Thiersch have been followed in my cases.

—F. S. Watson, *Boston Journal.*

A New Treatment for Acute Gonorrhœa.—In many cases which are characterized by an obscure etiology and pathology, the efforts of investigators to discover an abortive or radical cure, are constantly placing in our hands a host of new remedies which, after a brief period of popularity, are cast into oblivion.

To discover a cure for this scourge (gonorrhœa) of wedlock, to eradicate this penetrating coccus, to destroy it at an early stage of its development, is a task—is an object in life well worthy of research. How can we prevent it from working its way into the deeper layers of the urethra, where it lurks like a hidden snake, upon slight provocation, awaking from its dormant state to assert its power in the man who considers himself positively free from gonorrhœal taint.

But are we any nearer to the desired goal than we were ten years ago? Assuredly, no. This can be applied to the so-called new treatment for acute gonorrhœa which Dr. E. C. Cotes describes in the *Lancet*, February 27, 1892. He claims to cure his cases, all things being equal, within the period of twelve days, and brings forward, as evidence, forty-two patients who have been successfully treated by this method. Will this method stand the test? I feel assured that other observers, after a patient trial, will only ridicule and condemn this treatment.

As far back as 1889, a plan of treatment, almost identical with that described by Dr. Cotes, was taught by myself, and experimented with the assistance of Dr. W. G. States.

We continued our experiments for about six months upon about thirty acute cases of gonorrhœa, but the results were decidedly *bad*—yes, so bad that the method was abandoned.

The plan of treatment followed out by myself and Dr. States was as follows: Every case of urethritis in which the gonococcus was found, was placed on the examining table, and, after urinating, so as to cleanse the anterior urethra thoroughly, irrigated with hot water.

As the urethra, in the acute stage of gonorrhœa, is very sensitive, an 8 per cent. solution of cocaine was first injected. This injection did not allay the pain or irritation in every case. The Klotz endoscope was introduced, the urethra carefully dried with a cotton swab, and an application of a 2 per cent. nitrate of silver solution was made, one about four inches, and a second about one and one-half inches from the meatus. The tampon was removed, in each case, by dragging it along with the endoscope so as to touch the entire urethra. The patient was then directed to go to bed, and put on a milk diet. For the strangury, which always followed the application, he was given an injection of aqueous extract of opium, and was told to urinate in hot water, and, if possible, to take a hot sitz bath.

This treatment differed from the so-called new treatment of Dr. Cotes, in that the balsam copaiba was not employed, but, as a substitute, powdered cubebs and bicarbonate of soda (1 to 3) was ordered. The real great difference is found when comparing the results obtained. As mentioned before, my patients were not cured or benefited, but, on the contrary, were made worse, or refused to submit to the treatment. Some developed complications, such as phymosis, cystitis, prostatitis, and others epididymitis, etc.

The endoscope, in my hands, for the treatment of acute gonorrhœa, has proven a decided failure. It is, certainly, one of the most valuable instruments in the armamentarium of the genito-urinary surgeon; it certainly has its place, but, like many others, it finds its usefulness limited to a distinct number of cases only. What an important part the endoscope plays in the treatment of subacute and chronic urethritis. Here we are enabled, by its aid, to obtain a view of a circumscribed pathological condition, and thus apply treatment to the diseased part only.

Not so in acute gonorrhœa. As an instrument for the purpose of inspection the endoscope is a failure. No distinct picture can be obtained. The first four inches of the urethra are in the stage of active and increasing inflammation, and little or no pathological change has occurred. Next, the application of cocaine, which is required before introduction of the endoscope in the acute stage, would materially change the color of the inflamed mucous membrane, and we are

not able to distinguish healthy from diseased portions of the urethra. This so-called new treatment possesses other objectionable features, among which are the following:

1. It can be applied to a limited number of cases only. The meatus, in a real virulent gonorrhœa, is contracted, everted and swollen to such an extent that the introduction of an endoscope is a physical impossibility.

2. A still greater objection is the well-known fact that a large number of cases of acute gonorrhœa do not extend further back than two inches from the meatus, tending to become lodged in the lacunæ of the duct of the large gland in the fossa navicularis. How then would this treatment benefit these cases?

3. The insertion of an endoscope deeper than three to four inches will have a tendency of provoking a posterior urethritis and other complications.

4. The greater objection is the fact that a very few patients are able to follow out the plan of treatment, and thus, in private practice, it could not be recommended.

In order to convince myself once more that the treatment recommended by Dr. Cotes was not feasible, within the last few months I have experimented with it, and have reached the conclusion that only in his hands can such brilliant results be obtained.

This failure on my part to obtain satisfactory results will not deter me from giving it another trial. Perhaps other observers will obtain the glorious results claimed by Dr. Cotes.

During the next few months we will continue to experiment, and can only express the hope that we can join Dr. Cotes in sounding the praises of his so-called *new* treatment of acute gonorrhœa.

Since writing the above I have treated six more cases by this method and have utterly failed to obtain favorable results. —H. F. Nordeman, M.D., in *International Journal of Surgery.*

Tired Ovaries.—How many women in every hundred can stand, with health, the local and systemic excitement incident to ovulation and menstruation for thirty-three years—429 periods—if no pregnancy occurs? The average married woman will feel the effects inside of five years. Any organ in the body, vital or not, failing in its function, will eventually give trouble. When ovulation is accomplished the function of the ovary is, for the time being, complete, and there is a desire for rest; at the same time the uterus cries out to fulfill its function of child-bearing. During the period of gestation the ovaries get their period of physiological rest; if they do not get it, they become *tired.* We know that a large proportion of the diseases of married women are associated with, or dependent on, sterility. I think a very large number of gynæcological cases are due to *self-imposed* sterility. There is a mistaken notion prevalent among the people, and unfortunately sustained by some misguided doctors, that child-birth is a "woman-killing process." Physicians should spread the true doctrine that attempts to prevent child-birth cause tenfold more suffering and danger than child-bearing, including all accidents possible to the parturient woman. To some this may seem an exaggeration, but calm study will show it is not. It is impossible for the ovaries to ovulate regularly from puberty to the menopause without giving some disturbance. One rarely meets a healthy virgin of forty; and the married women who prevent conception or cause abortions fill our hospitals today. The only relief I know is pregnancy —or castration.—*Lanphear's Index.*

Gonorrhœa.—We should treat gonorrhœa just as we do an acute abscess; that is, by drainage, with just as much asepsis as possible. Let the urethra hang downward, with a bag of some sort loosely attached to it to catch the discharge. Do not have it tightly bandaged or plugged up with cotton. In a specific urethritis, where the inflammation has extended into the deeper layers of the epithelium, the various bichloride and zinc injections are not likely to do much good. In an ordinary, non-specific urethritis, however, where the inflammation is superficial, you can inject with good results. There are certain remedies which will increase the amount of urine and render it aseptic, so that you can use the bladder as an irrigator in gonorrhœal inflammation. Among these remedies is boracic acid, or, better still, the oil of gaultheria. This drug will absolutely sterilize the urine. You can give five or six drops every three or four hours. During the later stages of the inflammation, mild solutions of the sub-acetate of lead can be

used, which will help keep the urethra clean. A syringe with a short nozzle should be employed, so as to only just enter the meatus. The injection should be of moderate size, so as not to over-distend the urethra. During the acute stages, I instruct my patient to take a warm sitzbath night and morning. When the acute stage has subsided, the administration of some of the so-called blennorhetics will be found beneficial.

I have found the capsules containing santal-midy, a preparation made from sandal-wood, a very good thing. I consider these superior to the old-time cubeb preparations, which are liable to disturb digestion.—Wyeth, in *Doctor's Weekly*.

Gelseminum in Spinal Meningitis.—The following case of recovery from spinal meningitis treated by gelseminum may be of interest.

Patient was a female child one and a half years old, who had, for eight days previously to the date she came under my care, been irritable and feverish, and had occasional vomiting. On the day before I saw her the parents noticed that her head was retracted.

On examining her I found the muscles of the back of her neck in a state of spasm; her right leg was paralyzed and her left one partially so. She cried when moved, and pressure over the spine was evidently painful to her. Her pupils were normal, and there was no squint. Vomiting had ceased; temperature was 100.2°; pulse, 120°. There had been constipation, but bowels were moved a few hours previously by a dose of senna. Suppression of urine existed for eighteen hours. Chest sounds were normal. I gave her one minim doses of tinct. gelsem. sv., b. p., every two hours, and ordered hot flannel stupes to spine and loins, and a milk diet. She passed urine about half an hour after taking second dose of medicine, and a rapid improvement took place in her condition, so that she had quite recovered, with the exception of some debility, within a week.

This is the only case of this almost invariably fatal disease in which I have tried gelseminum, but the rapid improvement which followed its administration leads me to believe that in it we have a potent factor to this disease. The powerful action of gelseminum as a paralyzer of the spinal cord explains its efficacy.

—*Hospital Gazette.*

Cannabis Indica.—Next in importance to the coal tar compounds as a non-opiate anodyne is cannabis. This valued drug, years ago popular, if now little the fashion, deserves a much larger share of professional favor. Various causes have led to its present disuse. One, a fear of its toxic power; another, inferior—at times inert—products; and lastly, too timid giving—not pushing the drug to full effect. The first is baseless. Indian hemp is not a poison. There isn't a case of death on record. Hare, Potter, Bartholow, Stillé and Wood unite in this opinion. Wood says: "Hemp is not a dangerous drug; even the largest doses do not compromise life. No acute fatal poisoning has been reported." A prolonged personal experience compassing the history of many cases—men and women—and hundreds of doses, ranging from 30 to 60 minims of the fluid extract, has never brought any anxiety along toxic lines.

The second cause can be set aside by careful trial with various specimens, and, once a good one secured, that continued. It should never be called inert till full trial with an active product proves it.

The third cause is, largely, an outcome of the first, but it need not longer obtain. We repeat, hemp is not a poison. In some patients, specially impressible, it may cause alarm, or even frighten a medical novice; but alarming symptoms are not always dangerous ones, and no one need feel any solicitude on that score. This bugbear removed, the way opens for its use along larger lines, with the promise of greater good.

There is a consensus of opinion among writers on therapeutics as to the analgesic power of Indian hemp. Stillé says: "Its curative powers are unquestionable in spasmodic and painful affections." He also say: "Its anæsthetic virtue is shown in allaying the intense itching of eczema, so as to permit sleep." And that a similar, seemingly trivial, disorder may have a serious outcome is proven by the fact that a notable case of triple narcotic inebriety—a medical man, who took daily 15 grs. morphine, with 35 grs. cocaine, subcutaneously, and 14 ounces of rum, and was dismissed from our care, cured, two years ago, and remains well—had its rise in a morphine hypodermic taken to ease urticaria!

Probably the most important use of hemp is in that opprobrium of the healing

art—migraine. Two cases, sisters, each morphine takers for twelve years, reaching 30 grains by mouth, daily, recovered under our care during the last year.

Ringer says: "No single drug have I found so useful in migraine." He thinks it acts well in all forms, and seems most useful in preventing. He deems it specially effective in attacks due to fatigue, anxiety or climacteric changes. Dr. E. C. Seguin commends it highly. Dr. John C. Shaw finds it of value in structural brain disease. Dr. Wharton Sinkler gives first place to cannabis. Richard Green, who first commended it in this complaint, thinks it not only relieves, but cures, in nearly all cases giving lasting relief.

Anstie wrote: "From ¼ to ½ grain of good extract of cannabis, repeated in two hours, if it has not produced sleep, is an excellent remedy for migraine of the young."

Russell Reynolds thinks that in neuralgia, neuritis and migraine, even of long standing, it is by far the best of drugs. Mackenzie has used it with much success in constant all-day headache, not dependent on anæmia or peripheral irritation. Bastian and Reynolds commend it in the delirium of cerebral softening, and the latter says it calms epileptic head-pain and unrest. In cardiac tumult, in sinile delirium and the night unrest of paresis it acts well.

Grailly Hewitt says that in many cases of uterine cancer it allays or prevents pain. Ringer asserts it is sometimes signally successful in dysmenorrhœa. West commends it here. Potter states its anodyne power marked in chronic metritis and dysmenorrhœa. Hall thinks it of great value in chronic uterine irritation. Donovan and Fuller laud it in migraine and chronic rheumatism; Mackenzie in hay fever and hay asthma.

In the *British Medical Journal*, July 1, 1891, Dr. Suckling, Professor of Medicine, Queen's College, Birmingham, wrote: "I have during the last few years been accustomed to prescribe Indian hemp in many conditions, and the drug seems to me to deserve a better repute than it has obtained. In migraine the drug is of great value; a pill containing ½ grain of the extract, with or without ¼ of a grain of phosphate of zinc, will often immediately check an attack; and if the pill be given twice a day continuously, the severity and frequency of the attacks are often much diminished. I have met with patients who have been incapacitated for work from the frequency of the attacks, and who have been enabled by the use of Indian hemp to resume their employment." Later, in a personal note, he said: "I have used Indian hemp as an anodyne and hypnotic, and find it most useful in both ways. I have never seen any ill results."

In genito-urinary disorder it often acts kindly; in the renal pain of Bright's disease, in vesical spasm, retention of urine, and chordee. It calms the pain of clap equal to sandal or copaiba, and is less unpleasant. The distress of gastric ulcer and gastrodynia are eased by it, and in other neuralgias it often serves well. In some cases of advanced phthisis, and other cureless diseases, it brings euthanasia by allaying pain and unrest.

Failure with hemp is largely due to inferior quality. It is notoriously uncertain in this regard, which has had much to do, doubtless, with its limited use. It should never be called useless till full trial with an active product proves it.

Wood thinks the English extracts best. Last spring while in Bermuda with a party of patients, our supply—domestic make—giving out, we used a London preparation, and in several cases found it very satisfactory. The good repute of a hemp extract maker is no guarantee of its value. We have given that of more than one first-class house without result—10 and 12 grs. solid extract at a dose with little effect. Lately we have used a solid extract, of which a third of a grain dose has made itself felt.

Potter says: "Whatever may be the reason, it is a fact which he has often verified, that if the precipitate formed when the alcoholic preparation is added to water be of a brownish hue, a dirty yellow-brown, the sample will be almost inert; but if of a decided olive-green color, the preparation will be active."

Another cause of failure is too timid giving. I am convinced that the dose of the books is often too small. The only true plan is, once a good extract, push it to full effect.

My experience with hemp has been large—mainly in cases of narcotic inebriety—ex-users of opium, chloral, or cocaine. Habitual taking of these drugs begets a peculiar non-susceptibility to the action of cannabis, and makes essential a

more robust giving to secure the full anodyne effect. As a result, our doses have been large—over-large for a non-habitue—40 to 60 minims of fluid extract, every two to four hours, as required. Both sexes have taken them. They worked well. We repeat, general practice does not require such liberal giving, but it proves hemp harmless, and while our cases may involve a special condition favoring its good effect, they suggest a trial with other patients on whom it may also act well.

The tincture, 3 grains to the drachm, may be given in doses of 10 to 40 minims; fluid extract, 5 to 20 minims; solid extract, ½ to 2 grains, each hour or two. The wise way is a minimum dose at first, and repeated or increased till pain subsides, or systemic effort, without effect, proves it a failure. In headache, periodical or long continued, ½ to 2 grains may be given every hour or two till the attack is arrested, and then a similar dose morning and night, for weeks or months. It is important not to quit the drug during a respite from pain.

—Mattison, *Notes on New Remedies.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. Bing, M.D., Chester, Pa., Translator.)

The Principles of Treatment in Gonorrhœa (Neisser).—The base of all prophylactic and therapeutic measures in this affection is the recognized fact that the gonococcus is the cause of the infection. Its presence is established by the microscope. The danger of gonorrhœa consists in this:

1. That the virus and pathological processes do not remain localized in the part primarily infected, but that in man the posterior urethra, spermatic cord and epi didymus (with prostatic and bladder complications) may be attacked. In women the uterus, tubes, ovaries, etc., may participate in the inflammation.

2. That the virus in remote stages invades the deeper layers of the epithelium. From this extension superficially and deeply the virus remains active for an extended time in parts which are difficultly accessible.

The treatment should have in view the prevention of an anterior urethritis progressing into a posterior urethritis, from the acute to the chronic condition. Remedies having the following properties should alone be used: Those which will destroy the gonococcus while not increasing the inflammation, nor injuring the mucous membrane, as nitrate of silver, 1 to 4,000–1 to 2,000; sulpho-ichthyolate of ammonium (ichthyol), 1 to 100; sublimate, 1 to 30,000–1 to 20,000.

The inappropriate remedies are those which are solely astringent (from the danger of propelling the germs backward with the coagulated mucus during injection). The following are dangerous in the initial stage: Concentrated caustic solutions, mechanical means, as bougies endoscopy, etc.

The best method is frequent irrigation of the urethra by injections made by a large syringe.

Internal treatment is useless. In subacute cases microscopical examination of the discharge should be made for gonococci, and treatment must be continued for some time. If chronic urethritis exists, after the gonococci have disappeared, the treatment will depend on the condition of the mucous membrane and submucous tissue. The endoscope should be used to detect these alterations.

The treatment of gonorrhœa in woman is more difficult than in man. Continued microscopical examination is necessary. The treatment should be vigorous, and instituted as soon as possible to avoid infection of the uterus, etc. The frequency of cases of rectal gonorrhœa merits more attention than has been given to it, for it is frequently the starting point of a large number of chronic ulcers of the rectum.

—*La France Medicale.*

Fecundation of one Woman by Another.—Duhouset mentions a case of two sexual perverts, which he has observed. One of them married but continued her relations with her friend. The unmarried woman had a largely-developed clitoris which allowed of coition. This latter one became pregnant, much to her astonishment. The fact was explained in this way: The married woman, immediately after coitus with her husband, went, to further satisfy her passion, to her friend, who in a manner thus impregnated herself and became *en ceinte.*

—*Revue de Therapeutique Med. Chir.*

Some Cases of Extra-Uterine Pregnancy (*Dr, Fenerly Bey, Constantinople*).—A multipara, thirty to forty years; dur-

ing the pregnancy experienced unusual symptoms. At end of ninth month formidable symptoms occurred showing severe pelvic peritonitis. At first very violent fœtal movements were felt, which gradually ceased, and the patient recovered to some extent; she dragged out existence for three years, when she died. There was a considerable tumor in the left side of the abdomen.

2. Multipara, thirty-two years; six to seven months pregnant; without appreciable cause, showed intense pelvic peritonitis. Fœtal movements ceased. The tumor lasted several years, causing much suffering several times a year. The case was lost sight of.

3. Young woman, second pregnancy; menses suppressed for several weeks, then unusual symptoms occurred. It was thought to be a case of serious pelvic peritonitis from unknown causes. A month after the disappearance of the urgent symptoms, a careful examination disclosed a tumor in the left posterior cul-de-sac of the vagina; it was considered that it might be due to a peri-uterine hæmatocele, or to an abscess in the lower pelvis. An incision gave exit to considerable clotted blood, in the midst of which was a compressed two months' fœtus. The woman recovered in three months.

4. This case was obscure, and had been diagnosed as hæmatocele, abscess and salpingitis, by different practitioners, none of whom suspected extra uterine frequency.

An incision, gave issue to a compact mass of clots, in the midst of which was a flattened, shriveled, and mummified two months' fœtus. The woman recovered in twenty-five days under antiseptic treatment.

5. This resembled the preceding to some extent. The woman believed herself three months pregnant; when she met with an accident, occasioning a loss of blood from the uterus, followed by intense pain, and all the symptoms of an attack of pelvic peritonitis. These symptoms were attributed to an abortion; they ameliorated, but did not entirely disappear. A vaginal examination showed the posterior cul-de-sac tumified, with pointing and fluctuation. On incision, a two months' fœtus and large quantity of grumous blood escaped. Recovery complete.

The author is of opinion that peri-uterine hæmatoceles generally result from ectopic pregnancy.

Extra uterine pregnancy rarely goes to term; generally not beyond three or four months, and if not interstitial, but tubal, or ovarian, the orum may be detached at any moment, fall into the peritoneal cul-de-sac, and with the accompanying hemorrhage, form a hæmatocele.

—*Le Progress Medical.*

Hay Asthma (P. Tissier).—At the entrance of summer, generally in the second half of May, there appears in persons liable to this disease an acute coryza, at first slight, but already presenting certain peculiarities. The painful frontal and sub-orbital tension seen in simple coryza are here much more marked, and present greater variations in intensity.

From the first the nasal flow is very advanced and liquid. It increases under the influence of sunlight, etc., and is diminished considerably in-doors, the secretion often sets up an erythematous condition of the nostrils and upper lip. Epistaxis is rare. The mucous membrane of the nose is the seat of itching, sometimes severe; also of a sensation of heat and tension. Sneezing is an early symptom, presenting special characters, as facility of production, with great intensity, and frequent repetition. The sneezing occurs in series of four or five paroxysms at a time.

To these symptoms are soon added those of ocular origin, and, indeed, they are sometimes concomitant with the first nasal symptoms. There is first a sensation of itching and tickling, which causes the subject to rub the eyes, which, although giving temporary ease, is quickly followed by aggravation of the symptom. This puritis is seated specially at the inner angle of the eyelids, which are also slightly swollen. The flow of tears is nearly constant, obscuring the sight, and flowing over the cheek, and the excessive secretion is, perhaps, the cause of the itching above mentioned (Leflaire). Photophobia, more or less pronounced, is rarely wanting, since the action of the light increases the distress. Beyond slight conjunctival redness, and sometimes slight ciliary blephasitis, there are no objective symptoms. The disease may stop here; this is the oculo-nasal form. Beside the inaptitude for work, the almost forced stay in the

house, the general condition is almost normal. The condition persists for some weeks and disappears, leaving no traces, after having frequently shown alternations of improvement and relapse, and the patient then remains clear of the disorder until the following year, when, true to its periodical nature, it returns.

The second form, the thoracic, or bronchial, is much more common than the first. At the first attack, or, as more frequently happens, after several annual recurrences, the patient shows a graver condition of affairs, due to the appearance of the thoracic symptoms. After a prelude, so to speak, of the naso-ocular variety, the patient complains of a vague intermittent sensation of thoracic fullness, afterwards of dyspnœa, which, contrary to the other symptoms, appears towards evening, and increases in a gradual manner until it reaches by stages the true type of asthmatic dyspnœa. After having attained the maximum, the crisis becomes less intense and less frequent, while the expectoration becomes more liquid and abundant, and by degrees the symptoms disappear, generally at the end of a month or six weeks. Dyspnœa having once shown itself is almost certain to recur. These asthmatic symptoms are the source of some of the various names which have been given to the disease. The fever is generally slight, but may be severe, and this has given rise to the name "hay fever." With regard to the etiology—as to age the affection is most frequent from fifteen to twenty-five years, attaining its full development from twenty-five to thirty-five years. It has been observed in the infant. It is more frequent in men than in women, and in the well-to-do than in the poorer class, and principally in the white races, although the colored races are not exempt.

—*J. N. Mackenzie.*

The oldest pathogenic theory is that which points out, between the symptoms of asthma and the flowering of plants and grasses, a relation of cause and effect. Lately M. Leflaire and M. Lemoyez have endeavored to establish that "Annual Rhino Bronchitis" (the name proposed by them for the disease) should be classed among the arthritic affections, between gout and asthma. The disorder is only observed in individuals coming from gouty stock, and themselves presenting diathesic manifestations (urticaria, eczema, granular pharyngitis, etc.). The microbe theory has been proposed, but as yet has not been sustained. The "nasal" theory is the latest, and seems to be the best so far, and rests on the following data:

1. The symptoms referable to the nose are in a manner the constituent manifestations of the disease.

2. Frequently lesions of the nasal or naso-pharyngeal mucous membrane are observed (as chronic hypertrophic catarrh, hyperasthesia, etc.). If acute catarrh and hyperasthesia are included (and those superficial and slight lesions may be the point of departure of reflex troubles) we may say that nasal lesions are never wanting.

3. The fact of cures by purely nasal treatment, which are recorded in considerable numbers. The nasal theory seems to have been first proposed by Daly in 1881. Most authors have accepted it; some (as the author of this article) with the reservation that pollen and other dust may act as the exciting cause on a nasal membrane already susceptible to its action and permitting the development of the catarrhal conditions, and the predisposition of the nervous system, which gives from the commencement its peculiar characters to renal coryza.—*Annales de Medicine.*

An Absorbent Cotton for Surgical Uses (M. Gay). Absorbent cotton for the above purpose should be perfectly white, of a rather harsh feel, not crackling when pressed, homogeneous, and formed of long fibrils, instantaneously inflammable on the surface, but not blacking by burning, instantly precipitable on water, and possessing a coefficient of absorption at least equal to eighteen of a neutral reaction, and not leaving more than 1½ per cent. of ash, which should only contain carbonate chloritis, sulphate of potassium, and calcium. Absorbent cotton further should be aseptic, which may be easily realized by placing it, when required for use, in a drying stove. If good, it will not be ignited by the process.—*Gen. Rev. de Med. Ch. and Obs.*

Treatment of Cholera (Dr. Peter).—Combat the initial diarrhœa. If the tongue is furred, a light purgative to rid the organism of the "poisonous leucomaines, the cause of the disease." When cholera is fully established, it is necessary to oppose the effects of intoxication of the solar plexus not less than the primary

and persisting symptoms. To do this, paregoric elixir (French Codex), is given in 30 to 40 drop doses, four or five times daily, at the same time giving pills of ext. opium (1 cgm.–⅙ gr.) eight or ten times in the twenty-four hours, especially if there is vomiting.

For the reflex phenomena of the solar plexus, on the cord of which the cramps are the expression, one of the best means is the use of the "spinal" ice-bag. This almost certainly puts an end to the cramps and gives great relief. It may appear paradoxical to apply ice to the back of a patient in the algid stage, but the fact of the benefit derived remains.

To modify the vaso-motor innervation of the skin, whence results the prophetic chilling, mustard baths (1½ kil. for a large bath) at 95°, warming the patient sometimes 2°. The bath may be repeated twice in twenty-four hours. Hot water bottles, etc., are also used, and the usual drinks. Lactic acid has not appeared to exert any effect.

—Extract, *Bull. de l'Acad. de Medicine.*

Egypt as a Health Resort.—*Cases which Derive Benefit from a Winter Residence in Egypt.*—Cairo is rapidly growing in public favor as a winter resort, owing to the pure desert air, which acts as a tonic, the absence of rain, fog, snow, strong winds, and extreme cold; the very complete historical remains, and the modern fruits of English civilization. The patients who may safely be recommended to winter in Egypt are the asthmatic, those troubled with incipient, quiescent, or chronic diseases of the chest, sufferers from rheumatism in all forms, and nearly every other chronic disease. Patients suffering from rheumatoid arthritis are a little better off in Egypt than in other wintering places, and this is all that can be said. A dry climate is of value to patients with kidney disease, because the skin does the greatest part of the elimination, and the renal organs get a corresponding rest.

Contra-Indications and Drawbacks.—The cases which should not be sent to Egypt are those suffering from febrile or very advanced lung disease; those afflicted with extremely advanced disease of heart or other organ; those with a very limited supply of money, and those with chronic home sickness. There are many drawbacks to wintering on the Nile besides expense and the distance of six days from London. Insect life is very apparent in the form of flies, fleas, and mosquitoes, all requiring some cleverness of management. As regards food, we have very fair mutton and beef, good poultry, excellent ducks, snipe, and quail, indifferent bread and cow's milk, perfect fresh butter, doubtful eggs, and a delicious variety of vegetables and fruit.

Season and Route.—Visitors are advised not to reach Egypt before November, which is one of the best months in the year. Until the railway from Port Said to Ismailia is completed, they are recommended to land by way of Alexandria, thus avoiding all risk of exposure to night air and bad trains. Patients with lung disease should not leave Egypt till the end of April, at least; and rheumatic patients should stay in Cairo till the end of May, or even later, to get the full benefit of dry heat. When Cairo becomes too hot, Ramleh—a seaside suburb of Alexandria—is recommended as a suitable place for a week or two on the way back to Europe. Intending visitors should err on the side of bringing too much, rather than too little, warm clothing; for the cold after sunset in January, especially on the Nile, is intense.

Rainfall, Temperature, and Winds.—November, already praised, is a rainless month. In December the invalid will be subjected to an average maximum heat out of doors of 69° F., in January 67°, in February 68°, in March 76°, in April 84°, and in May 92°. The average minimum temperature by night out of doors does not concern the invalid, but he ought to be greatly interested in his bedroom minimum heat. In Cairo this need never fall below 63°, while in April it rises to 68°, and in May to 72°. Rain falls on an average three days in the month in Cairo between December and April, but the whole rainfall of the year is only 1¼ inches. In February there begins usually a dry, dusty, desert wind, which reaches its maximum (seven days in the month) during April. It is not unwholesome except to the temper, but it is a decided nuisance, and sometimes lasts three days at a time.

Water Supply and Sanitary Arrangements.—The Nile water, when carefully filtered, is excellent to drink. Ice is made from distilled water by the water company. A drainage scheme will be commenced next summer; at present the best hotels

and houses frequented by the English are furnished with cemented cesspools outside the house, carefully trapped and ventilated, and emptied by an odorless pneumatic system. The mosques and bazaars are all unsanitary.

Nurses and Hospitals.—Several English nurses can now be obtained in Cairo; there are also good *masseurs*, and a small English private hospital.

Helouan: the Pyramids and Luxor.—Helouan is a suburb of Cairo where rheumatic and skin patients can take sulphur baths closely resembling those of Aix-les-Bains during the winter, when it is too cold to do so in Europe. Life is very quiet, the air exhilarating, and an excellent hotel has just been opened there. At the Pyramids there are many similar attractions, but no sulphur baths. Besides the Sphinx and Pyramids themselves, there is a constent stream of pleasure-seeking visitors in addition to the searchers after health. Luxor is 450 miles south of Cairo, and can be reached by various steamers and Nile boats, while the railway line is being gradually extended to it. The climate is perfect during January and February. There is no rain; the air is almost the dryest in the world, and the temperature, though cold at night, is delightful by day, being something like that of Cairo in February and March respectively. Thebes and Karnak are both within easy donkey riding distance from Luxor.

—F. M. Sandwith, M. D., (*Cairo.*) *Brit. Med. Jour.*

News and Miscellany.

THE Chicago *Sunday Herald* has had fifty samples of milk examined, out of which all but forty-nine were found to be unadulterated. From 20 to 50 per cent. was lake water, with all its impurities; among which the tubercle bacillus figured with alarming frequency.

A BERLIN druggist's assistant dispensed caustic soda instead of silicate; and a Berlin doctor applied it to a child's leg, and never found it out until his own fingers began to hurt during the next night. The child's leg had to be amputated to save its life. The druggist and one assistant were fined $75; another assistant, $25; and the apprentice, $7.50.

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"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting, and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,
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PAGE.

ORIGINAL ARTICLES:

PHILADELPHIA COUNTY MEDICAL SOCIETY. By S. Lewis Ziegler, M. D. 527
HEADACHE. By W. G. Stewart, M. D. 532
STRAY LEAVES FROM A PRACTITIONER'S CASE-BOOK. By William F. Waugh, M. D. 535

EDITORIAL:

ENDOWMENT ORDERS 536
REVISING THE CODE 537
SPECIAL ISSUES IN PREPARATION 537
ENURESIS 538

ANNOTATION:

Berkman 538

LETTERS TO THE EDITOR:

Resorts for Consumptives. *"Duncan"* 539
What They All Say. *"Spurgeon"* 540

PAGE.

Why the Physician Should be an Educated Pharmacist. *Hazard* 540
Cystitis, with Complications. *"J. M. R."* 541
Gastro-Intestinal Disorder. *"W. F."* 541
Obscure Rectal Case. *"W. E. H."* 542

THE MEDICAL DIGEST:

The Internal Administration of Ozone in the treatment of Phthisis (*Norris*)—Ifterrupted and Conversion Method of Treating Malaria (*Gray*)—Botkin's Drops (*Medical Review*)—Dermatol in the Treatment of Buboes (*Foscholo*)—Phagenda (*Ghosal*) 542, 544, 546

BOOK NOTICES:

Physician's Leisure Library. *Bulkley* 547
Atlas of Clinical Medicine. *Bramwell* 547
Physician's Pocket Day Book. *Leonard* 548

NEWS AND MISCELLANY 548-552

NOTES AND ITEMS ..... iv, vii

Original Articles.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CASE OF RECURRENT HEMORRHAGE FROM THE CILIARY BODY, RESULTING IN CATARACT—RECOVERY OF NORMAL VISION BY OPERATION.

BY S. LEWIS ZIEGLER, M.D.

[Read October 12, 1892.]

RECURRENT hemorrhage into the vitreous was first described by von Graefe in 1854. According to many observers these hemorrhages are usually accompanied by irritation of the generative organs in effeminate youths, or irregularity of the menses in girls. Constipation seems to be usually present. Epistaxis is also a frequently associated symptom. Many cases of sub-retinal hemorrhage have been recorded by Eales, chiefly in young men, in whom he considers the hemorrhage to come from over-congestion of the venous capillaries of the choroid, accompanied by temporary constriction of the blood-vessels of the alimentary canal and generative organs. This latter he considers the cause of the constipation. The initial lesion he credits to a vasomotor neurosis, through which the systemic functions are perverted. In the following case, however, chronic constipation, arising directly from a severe attack of acute dysentery, proved to be the immediate origin of the intraocular hemorrhage. There have been some "flushings," or vasomotor disturbances, but all prior to the period of intraocular hemorrhages. There has been no epistaxis, and no menstrual disorder of any consequence. The history of this case differs, therefore, from other recorded cases in the origin of the constipation, in its direct effect on the ocular circulation, and in the absence of the usual accompanying symptoms.

M. C., aged twenty-one, for the past seven years an inmate of the Pennsylvania Institution for the Blind, applied for relief at the Eye Dispensary of St. Joseph's Hospital on April 28, 1890, presenting the following detailed history:

Was born and reared in Ireland. Health and vision had always been excellent. Landed in this country in October, 1883. Two weeks later, while standing in the street, first noticed a a persistent red spot before the left eye.

This gradually increased until vision was wholly obscured. Although no treatment was sought or applied, the extravasation was reabsorbed in the three weeks succeeding. Before vision was fully restored, however, a second and larger hemorrhage took place in the same eye, while the patient was in bed. This likewise received no treatment, owing to her peculiar diffidence, which has always led her to conceal all personal ailments. As the left eye never cleared up after this second severe hemorrhage, it is impossible to say whether any subsequent hemorrhage has taken place or not.

Two weeks later, while in bed, a large hemorrhage occured for the first time in the right eye, and she awoke to find herself totally blind. Here alarm overcame her timidity, and she consulted Dr. Heyl at the Eye Dispensary of the Episcopal Hospital. She was admitted into the wards of that institution, and under treatment the right eye cleared up in about three weeks. The second severe hemorrhage in the right eye occured about one month later, while the patient was seated in a chair. This was soon absorbed. During March, 1884, numerous slight hemorrhages occurred and cleared up in a few days, only to be followed by similar mild attacks. These smaller hemorrhages never wholly obscured vision, and, like the more severe ones, no attack was preceded by pain or other premonitory symptoms, save the appearance of a "small black spot" before the eye, which only indicated the first portion of escaping blood.

The subjective sensations caused by these hemorrhages were both interesting and characteristic. A simple turning of the head back to look up at the ceiling would cause the cloud to condense into a button-like mass, around which vision was clear. Again, on looking straight before her, the slightest movement of head or eyes would cause diffusion of the mass, and thus obscure the sight. By fixing the eyes steadily on one object, however, the cloud would either sink or rise, leaving vision free.

It is also interesting to note that the patient's sister at about this period observed an inequality of the pupils, the left pupil being noticeably dilated; thus, probably, denoting the permanent impairment of the visual function of the left eye. This observation was confirmed by Dr. Heyl.

Finally the right eye cleared up about two months before her discharge from the hospital, leaving only a small central cloud before the eye, most apparent by gas-light.

One week after leaving the hospital a slight effusion occurred in right eye while quietly seated in church. This was immediately dissipated, so that she could comfortably find her way home. The same afternoon, however, while buttoning her shoe, the third severe hemorrhage came on, from which time she has never recovered good vision in the right eye.

In May, 1884, she applied to Wills' Hospital and was admitted by Dr. Strawbridge, who has kindly furnished me with the following record: "Sight began to fail about one year ago. Probable effusion into vitreous; repeated attacks since then. *Status præsens:* Left eye, retina floating in vitreous; large deposit of exudation débris. Right eye probably the same condition, but of more recent date; has red reflex from vitreous, due to recent hemorrhage. Tension normal; bowels constipated; menses regular. Examination of urine, negative. Treatment: pilocarpine hypodermatically, iodide of potash, and inunctions of unghydrarg."

Iridectomy was performed on left eye by Dr. Strawbridge soon after admission. Two weeks later the same operation was done on the right. The vision in the right eye was considerably improved, and absorption promoted by this operative interference. The visual gain, however, was never more than the ability to distinguish the outlines of objects or to count fingers. Neither operative nor therapeutical measures have had any appreciable effect in modifying the condition of the left eye, which has since remained hopelessly in *statu quo*.

In May, 1885, she was admitted to the Pennsylvania Institution for the Blind. Two weeks after admission the fourth large hemorrhage occurred in the right eye while going up the steps. She sought no treatment, and recovery was spontaneous. Since then there has been no remarkable change in either eye, save only the gradual but persistent increase

in the dimness of vision in the right eye, until for the past five years light perception alone remained.

General History. Has had the usual febrile disturbances incident to childhood; never had typhoid fever or other serious illness; has never suffered from severe headaches; never had nose bleed, save once when a child and once during the past year. For several years preceding 1883 had "rush of blood to the head" when stooping or lifting; very violent while it lasted, with turgid blood-vessels of face and neck, but never became dizzy. This ceased while under Dr. Heyl's care at the Episcopal Hospital, and has not recurred. While growing up has often noticed petechiæ, or "devil's pinch," on arms. Has never suffered from hemorrhage after extraction of teeth, nor after small wounds. There are no signs of hæmophilia.

Menstruation began at fourteen; has always been regular except during the year following the first intraocular hemorrhage, when she suffered somewhat from menorrhagia and irregular periods. This function has been perfectly regular since 1884; is not at all chlorotic; urine normal.

About the time of first hemorrhage she began to suffer badly from chronic constipation, which has persisted ever since; sometimes lasting for ten days, once over two weeks, but more frequently for one week. Relief is only gained by continued use of purgatives. These were administered daily while under Dr. Heyl's care, and seemed to aid most in her improvement. Has had recurring hemorrhoids for several years.

In searching for the cause of this intestinal disorder, of which there is no previous history, I found that while on shipboard she had suffered from a violent attack of dysentery. This was so serious as to confine her to her bed, and resulted in two severe intestinal hemorrhages. She was detained in quarantine for several days, and then sent to her sister's home, where she rapidly convalesced. This was just two weeks preceding her first intraocular hemorrhage.

Status præsens. Right eye shows iridectomy upward, with slight cystoid cicatrix on nasal side. Iris healthy. Pupil reacts to light and mydriatic; no "iris shadow" on lens, which is thoroughly cataractous, but not calcareous; although mature has not yet become completely opaque, being opalescent or amber-colored, with white striations in lens capsule. Cornea is clear; vision normal. Perception of light is prompt, and projection—by candle field—fair.

Left eye shows keyhole iridectomy upward and inclining toward nose; edges clean out. Cornea and iris normal, save slight dilatation of pupil, which does not react to light. Lens present and perfectly transparent, excepting a *small central nebulous opacity in posterior capsule.* By direct method fundus reflex appears grayish-black. Oblique illumination shows vitreous thoroughly disorganized and filled with floating masses of yellowish-white or tawny-colored fibers—probably shreds of decolorized blood-cuts unabsorbed. Movement of the eyeball shows that some of these larger fibers are still attached above to the ciliary body, from whence they float downward. Light perception fair; light projection poor. Tension normal or slightly minus. Slight divergence.

As the patient had on several occasions been absolutely refused any further operative interference, I may be pardoned for stating in detail my reasons for giving a favorable prognosis in the case of the right eye, and thereby advising extraction of the complicated cataract. These are,—

First. The strong probability of a preserved transparency of the vitreous humor, as shown by the prolonged power of spontaneous absorption, which had so frequently led to recovery of vision in the right eye; while, from a lack of this same functional activity, the left was virtually a hopeless loss after the second hemorrhagic attack.

Second. The probable limitation of these hemorrhages of the ciliary body was most favorable. Such a condition was indicated by the fact that absorption was always very rapid; by the interesting subjective sensations of the patient, so characteristic of intraocular hemorrhage from the anterior portion or the eyeball; and by the presumably analogous condition of the left eye, in so far as it showed the unabsorbed fibrous

remnants of blood-clots attached to ciliary region.

Third. The slowly increasing cortical cataract, which probably began about the time of discharge from the Episcopal Hospital, when she complained of "a small central cloud before the eye, most apparent by gas-light." Judging from the subsequent history of this eye, and from the fact that the lens of the left eye, although still transparent, now presents "a small central nebulous opacity on posterior capsule." I am inclined to believe that this "central cloud" was the first subjective symptom of the approaching cataract. The lenticular opacity alone was sufficient to account for the rapidly increasing dimness of vision suffered by the patient during the ensuing year, 1884 to 1885.

Fourth. The fact that this cataract was cortical and not calcareous was a most favorable factor in the prognosis. It removed the pathogenesis from a dangerous choroidal lesion to a very mild nutritive disturbance in the ciliary region; in fact, just such as might result from repeated hemorrhages, with non-inflammatory sequelæ.

Fifth. The preservation of good light perception and fairly good projection, as shown by candle-field, in an eye with tension and general appearance normal.

The patient was admitted to St. Joseph's Hospital, and extraction performed under ether. A small portion of iris was excised on nasal side in order to free the cystoid cicatrix. The capsule was rather tough, and did not rupture easily. Lens was extruded nicely, there being no soft cortical. A small amount of vitreous escaped, which appeared syrupy and slightly straw-colored. A very light dressing was applied, and healing was prompt.

At the end of the third week patient could count beds in the ward, a fair result, considering the heavy capsule remaining. This amount of vision was suddenly obscured by what the patient suspected was a hemorrhage. She had not previously acknowledged her tendency to constipation, which had at this time persisted for ten days, owing to her neglect of purgatives. She was given a purge, and not much attention paid to her suspicions of hemorrhage, as she was still very nervous. As is later shown, there was an actual occurrence of hemorrhage at this time.

Some weeks later, as the eye seemed perfectly quiet, a capsulotomy was performed under cocaine. This progressed nicely for a day or two, when the eye began to show signs of ciliary irritation. Atropine and calomel were ordered, with some relief. On the fourth day, however, I was surprised to find a sudden wide dilatation of the pupil. The tension had jumped to + 2, and an attack of acute glaucoma inaugurated. Eserine (gr. j. to the ounce) was instilled, the temple leeched, and calomel continued. The eserine was afterwards increased to gr. ij. and later to gr. iv. to the ounce. Frequent leechings, chiefly with Heurteloup were made, and the glaucoma actively combated for several weeks. Even after this attack was allayed the glaucomatous tendency had to be held in check for some months. This complication made the prognosis look very doubtful. The ocular neuralgia was quite severe, and this combined with the neuralgic pains arising from numerous leechings, helped to depress the spirits of the patient. Finally the eye became free from pain and injection, which latter had never been extremely marked.

The origin of the glaucoma is not clear. Possibly the eye was predisposed; possibly the operation and the atropine excited the latent tendency. I learned later from the patient in the next bed that my patient had injudiciously eaten some early fruit within thirty-six hours after the operation, and had been seized with vomiting soon after. Her unfortunate reticence, as usual, prevented her telling me. I did not attach due importance to vomiting as a causative factor until a patient who had been operated on for catarrh returned to the clinic suffering from acute glaucoma as a result of three days of bilious vomiting. In this case there was no other discoverable cause, and indeed the icterus was apparent in the conjunctiva of the affected eye.

This attack yielded promptly to a strong solution of eserine, and vision recovered unimpaired.

Still another cause has been suggested by Dr. Knapp, of New York,[1] who

[1] Archives of Ophthalmology, July, 1892.

has recently published a series of ten cases of glaucoma occurring after capsulotomy. As he performs capsulotomy after every extraction showing the slightest evidence of opaque capsule, his observation has more than usual value. I am inclined to believe, however, that all these elements contributed to the disturbance. The eye was predisposed; the operation kindled the embers; the vomiting fanned them into action, and the atropine added fuel to the flames.

Recovery was decisive when it occurred, although I insisted on a continuance of one grain eserine solution for several months. The test for glasses, when finally made, was a great surprise, vision being absolutely normal.

O.D. 3/cc S. + 9 D. ⊃ c. + 2.50 D. ax. 180° = 20/xx partly.
O.D. S. + 15 D. ⊃ c. + 2.50 D. ax. 180° = Jaeger, No. 1.

These were ordered in ellipse, bifocals. The field of vision was normal. An examination of the right eye showed evidence of two distinct hemorrhages. The older was decolorized, a greyish-white fibrinous clot, web like, attached above to ciliary body on nasal side, with long fimbriæ floating off down and in. The more recent hemorrhage appeared black, and was attached to the ciliary body up and out, with long, narrow streamer floating downward. In the past year this has also become decolorized. The only other change to be noted in the past year is the appearance in the bottom of the anterior chamber of a small fragment of old fibrinous clot that has broken loose and slipped over the iris. About one year ago she had a slight hemorrhage in the right eye, from constipation of ten days' duration. By treatment and careful regulation of diet, however, this habit has been cured, and she has now been free for the past six months.[1]

The notable features in this interesting case are these:

1. The repeated attacks of hemorrhage from the ciliary body.

2. Constipation as a direct causative factor in hemorrhage from the ciliary body.

3. The fact that these hemorrhages were spontaneous, and did not occur while stooping or straining at stool.

4. The preservation of the visual function in the right eye, while lost in the left.

5. The occurence of cataract in the right eye, and not in the left.

6. The occurrence of retinal detachment in the left, while the right escaped.

7. The glaucomatous attack after capsulotomy.

8. The recovery of absolutely normal vision in an eye containing semi-fluid vitreous and floating masses of hemorrhagic débris.

DISCUSSION.

Dr. Abert G. Heyl: This case was under my care in its early stage, but so long ago that I cannot recall the particulars in a general way. There is one feature to which I might advert, and that is the opacity, the division of which restored sight. My impression on examining the eye, at the time the patient was under my care, was that the whole vitreous had been involved and filled with blood, and that impression remained with me until a year ago, when Dr. Ziegler sent the case to me for examination. The thick membrane had been divided, it was evident that the vitreous was clear and probably had never been involved. The opacity, which seemed to be in the anterior part of the vitreous was probably immediately posterior to the lens. I believe that hemorrhage had taken place from the ciliary body and forced its way directly behind the lens capsule, so that it lay between the capsule and the hyaloid membrane which obscured the light. That is an unusual occurrence. I do not know that there is such a case on record. Usually the blood works its way into the vitreous. The result has been an exceedingly brilliant one, for the patient seemed doomed to blindness.

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[1] This relief may be in part due to a change in residence and occupation, as she left the Blind Asylum in June, 1892, and is now engaged in the instruction of feeble-minded children in the Pennsylvania Training School, at Elwyn, Pa. She has therefore become a useful member of society, and able to earn her own living.

Subscribers remitting now receive the Journal for the balance of the year free. Only $3.00 a year.

HEADACHE.*

By W. G. STEWART, M. D.

AMONG the many minor ailments to which the human body is prone, headache is one of the most troublesome and most frequent. Scarcely a day passes without some suffering person seeking our aid to be relieved of this affection. Remedies have been suggested without number; druggists and drug clerks dispense headache-mixtures without discrimination; one neighbor shares her headache powders and pills with her associates; quacks vend headache cures on the streets and every newspaper contains flaring advertisements of "the great specific." It is about time for us to call a halt upon this general dispensing of drugs by the laity and non-professional men and confine it within its proper bounds. It is a comparatively easy matter to relieve a headache temporarily but this is not accomplishing permanent results.

By headache is meant any pain in the head independent of location or cause and is always symptomatic of some local or constitutional disorder.

When we consider the etiological factors of headache, we have open to us the whole field of medicine, for what pathological condition will not be responsible at times for pain in the head. Let us specify a few leading points with a view of gaining more light on the general subject.

Probably there it no condition that is so often overlooked, yet so important, as is the condition of vision. Astigmatism, myopia, presbyopia, improper light and print, eye strain and weakness of the eye muscles cause most of the cases that are met with in students, literary men, book-keepers and those who use their eyes constantly for fine work. Numberless cases have been cited in the journals and text books to substantiate this statement. Excitement, worry, grief or prolonged mental activity will occasion it. It is often produced reflexly by womb diseases and disorders of other organs in the body. Indigestion, improper food, constipation, pathological secretion and excretion of bile, certain drugs, uræmia of Bright's disease and other kidney affections or the presence of intra-cranial tumors, abscesses, tubercles or effusions. Syphilis, cancer and tuberculosis are often responsible. Headache is a common concomitant with the menstrual flow in many women. Anæmia, plethora and other blood diseases. Constipation is a very common cause. It is also present as a prodromal, active and following symptom of all fevers and acute diseases. Inflammatory troubles cause it, and, in fact, it is present in almost every disease imaginable.

The true cause of headache is still shrouded by the veil of obscurity, but many theories have been advanced to account for it. One writer claims it to be a localized, temporary or permanent conjestion of the brain. Another says it is an anæmia or impairment of the blood supply to the special part of the brain affected. Still again it is held to be caused by the presence of ptomaines in the blood that act locally and selectively on certain parts of the brain structure. It may be wholly dependent on reflex irritation. However, without attempting to substantiate any one of these theories and without committing myself to them, let us consider some of the various forms of headache.

Migraine, megrim, hemi-crania or sick headache is an affection located on one side of the head only. It begins with a slight or marked dullness of vision and pain in the eyes and is soon followed by giddiness, pain of varying intensity on the one side of the head and nausea. Vomiting of a greenish, offensive bilious matter accompainied by throbbing pain in the temple and forehead and, occasionally, rise in temperature. It is paroxysmal in character, coming on at more or less irregular intervals, and lasting for one to twelve hours or longer.

Nervous headache is most common in anæmic women; short in duration and very severe. There is no increase of temperature, great nervousness and often prostration.

In *congestive headaches* there is throbbing pain through the temples; congestion of the veins of the face and forehead; congestion of the retinal vessels; soreness of the eyes and giddiness.

*Read before the Cumberland County (Penn.) Medical Society at its quartely meeting in Carlisle, Oct. 4, 1892.

Headache from eye strain is usually in the frontal region and is accompanied by eye symptoms, such as pain, photophobia, smarting and imperfect vision, together with soreness of the scalp.

Decayed teeth sometimes cause constant or intermittent headaches that are relieved by extracting.

These examples will suffice to illustrate a few of the many manifestations of headache. Never fall in the error of calling every pain in the head, headache. Always make it a point to examine closely for yourself, for it is possible that the pain is extra-cranial and caused by periostitis, abscess, syphilitic gumma, rheumatism, neuralgia, disease of the ear or allied external affections. These mistakes frequently happen and are to be avoided only by giving proper attention and examination to every case that presents itself to you for treatment. It is always unwise and improper to prescribe through a third party's description of symptoms unless you are acquainted with your patient. Having decided that you have a case of headache with which to deal, the great question is, what will be the proper

TREATMENT.

The treatment of headache divides itself into two distinct groups—(1) radical and (2) palliative.

1. *Radical treatment* is best instituted and carried on during the interval between the attacks and is directed at the cause. Syphilis, lead poisoning, tuberculosis and all constitutional and local and blood disorders must be treated with appropriate remedies and in this way insure permanent results. The very best hygienic and dietary measures must be followed and light exercise should be taken daily in the open air. Excitement, worry, fatigue, great noises, bright lights, alcoholic drinks and all excesses must be avoided. Do not allow this class of patients to spend much time over books, papers, fine needle work and the like, but insist on out-door sports and recreations. In anæmic cases administer iron, arsenic and strychnine in small doses. In point of fact you will accomplish your best results in young persons by administering very little medicine and by insisting on proper out-door life, appropriate diet and suitable clothing.

Whenever there is the least cause to suspect defects of vision, have the eyes properly tested by a reliable oculist and have proper glasses worn. The question of wearing glasses at this day is not a question of fashion, as some would have us believe, but a question of absolute necessity, for the inventions and requirements of to-day are more ruinous to the eyes of the rising generation than to their ancestors who have lived slower and not ten or fifteen years ahead of their day as is the case at present. When ocular defects are properly corrected, headache from that source ceases to trouble your patient. Again, insist upon it that your patient works with his back to the light and not facing it as is too frequently the case.

Patients of a bilious temperment require constant attention and should regularly attend to their peculiar condition. Cathartics should be administered as is necessary to have one or two free movements from the bowels every day. Free flushing of the lower bowel, with large quantities of warm water often does better than cathartics. Those persons who are subject to congestive headaches should never run nor over-exert themselves as they are sure to have an attack if they do. Much more might be said on this subject but we must hurry to the consideration of

PALLIATIVE TREATMENT.

The physician who can relieve an attack of headache temporarily in five minutes will get more credit from the patient than one who relieves it permanently in a few hours or days. What then can be done to give hasty relief?

No class of remedies has demanded the attention of the profession to a greater extent than have the coal-tar derivatives. In this class we have appearing prominently acetanilide, phenacetine and antipyrine. Each of these drugs, when given separately in doses of five or ten grains at intervals of one-half to one hour, will afford partial or complete relief by their analgesic action. Acetanilide and phenacetine are preferable to antipyrine for the latter is a proprietary preparation whose exact composition has never been

given to the profession. If for no other reason than this it is to be condemned and cut from our lists of drugs. Antipyrine, in doses of two grains, has caused such grave toxic symptons in certain individuals that it was only after the most prolonged efforts that life was saved. It is such an uncertain drug, so depressing in its action and, in some cases, acts as such a rank poison that not one grain of it will ever be dispensed in my practice—at least not until its exact composition is made known.

Many of our most reliable preparations are proprietary, but they are not to be condemned on this account if we know what they contain. When we use *unknown proprietary medicines* and prescribe them to our patients, we are only lending our name to the advancement of quackery and empirical medication. It is my custom to employ acetanilide and phenacetine with other remedies to guard against depression and untoward symptoms. Any of these combinations will be found to act better than the drugs given alone.

℞.—Acetanilid. vel phenacetin. . gr. j.
Quininæ bisulphatis . . . . gr. j.
Cocainæ hydrochloratis . . . gr. $\frac{1}{16}$.
Misce. Fiat capsula vel compressed tablet No. 1. Signe. One every half hour till relieved.

℞.—Acetanilid. vel phenacetin. . gr. j.
Caffeinæ citratis . . . . gr. ss.
Misce. Fiat capsula No. 1. Signe. One every half hour until relieved.

These combinations act nicely in all forms of headache and give prompt relief without depressing the heart as is the case when these drugs are given alone. If there is great nausea recourse must be had to other remedies. Quinine alone is of little value except in malarial types and even then it must be slow in affording relief. Salicylate of soda and other salicylates, in doses of five to ten grains every hour, act admirably in those cases where rheumatism is present and in the headache so common in influenza.

Congestive headaches are best relieved by small doses of aconite or veratrum viride at frequent intervals until the physiological effects of the drug are obtained. Very severe cases may require venesection but this is very rarely necessary at the present day. Tr. belladonna is also given. Trinitrin (nitro-glycerin, 1 per cent. sol.) one drop every hour. If the stomach is overloaded with improper food, administer a good emetic of warm water.

One drop doses of tr. nux vomica every ten minutes, for an hour or two will relieve *nervous headache* and allay nausea.

Hysterical headaches require valerian, asafœtida and bromides together with strychnine in small doses.

Migraine. It is best to make your patient drink as much tepid water as they can and in this way produce free vomiting to cleanse the stomach. Follow this with one drop doses of tr. nux vomica every ten minutes until the stomach is settled. Sometimes this will relieve the case entirely. If it does not, then give one of the aforenamed combinations. Fluid extract of guarana, twenty drops in water every hour, is often very efficient. Nitro-muriatic acid, ten drops in plenty of water every hour, is recommended. Anstie recommends cannabis indica (extract) gr. ¼ in younger patients.

When we come to review the therapeutic measures adopted in the *palliative* treatment, almost every drug in the materia medica finds a place. *Opium should never be given in cases of headache*, for if the habit is once formed it can not be broken very easily. A habit is never formed for the coal-tar derivatives.

So far our attention has been given to internal medication and we must be directed to a few local measures. A mild current of galvanic electricity passed through the temples or other parts of the head will often break a severe headache. Simple rubbing or massage of the scalp often soothes the patient into a gentle sleep. Applications of hot or cold water; ice; menthol and liniments do a limited amount of good. Binding the head up tightly with a band is a common resort. A hot mustard foot-bath sometimes affords speedy relief. Also Turkish baths.

Many other methods are of use but can not be mentioned at this time, for it has been my intention to outline major points and leave others for consideration in the discussion or during your leisure hours. Too much stress cannot be placed upon the necessity of making a special study of every case and treating it from the standpoint of its cause rather than upon

the "hish-hash" course that acts on the principle that "one ingredient may luckily hit the mark."

NEWVILLE, PA.

STRAY LEAVES FROM A PRACTITIONER'S CASE-BOOK.

By WILLIAM F. WAUGH, M.D.

PHENOCOLL HYDROCHLORATE.

A SEVERE hemicranial neuralgia, in a weak, nervous, sensitive man. The existence of a former narcotic habit rendered the choice of remedies somewhat limited. Eight grains of phenocoll were given at one dose; and in ten minutes the patient was asleep, and after a good night's rest he awoke quite well. No after effects, no depression, no sweating, no drawback, excepting the very unpleasant taste of the drug.

EUROPHEN.

Again has the value of this drug in burns been demonstrated. A severe scald, treated by europhen in 2½ per cent. petrolatum ointment, healed up with unexampled rapidity. This drug parts with its iodine very readily.

LOCAL SEDATIVES.

The local use of sedatives appears to be unknown to the chiropodist. A gentleman came in with a very ugly ulcer on the toes. He had undertaken to remove a soft corn by means of some nostrum. The result was a foot so sore that he consulted a chiropodist. This practitioner treated the ulcer with exsiccated alum, varied by occasional applications of silver. Under this treatment the ulcer steadily increased its diameter, and became more malevolent in aspect. The pain was atrocious. A similar ulcer formed on the opposite toe; both spread to the back of the toes, and the foot became much swollen. At this juncture medical advice was taken. The foot was washed with dilute chlorinated soda, dried, and the ulcers covered thickly with bismuth subnitrate. It was then let alone. The pain subsided, and in a very few days the cure was completed.

LATERAL CURVATURE.

A young girl had complained of "backache" for some years. She had been treated for divers ailments, including uterine disease (non-existent), rheumatism, myalgia, neuralgia, etc. An examination showed a slight lateral scoliosis, with projection of the sternum on the right side. Reconstructive tonics were given, in generous doses, with good diet, and the muscles of the back and chest faradized every day. The pains have been relieved, the girl's gait is erect, and the curvature is less marked. The ordinary corset has been replaced by one having the sides of elastic, which allows much more freedom of motion. This case is an illustration of the necessity for thorough examination in cases whose nature is not immediately obvious. Any tyro in the medical art could have diagnosed the case, had he taken the trouble to strip the patient to the skin and examined the chest properly. Some patients may object to this, but, as a rule, people come to a physician for relief, and they are grateful to him for the pains he takes with them.

BEEF AS AN EXCLUSIVE DIET.

A gentleman who had suffered long from dyspepsia, constipation, anorexia, and consequent debility, was advised to adopt the Salisbury diet of beef exclusively. The first effect was not encouraging, as he lost ten pounds from an already emaciated body. But after that he began to improve, and his verdict after six weeks' trial was: "Better than I have been for ten years."

A girl 19 years old, a typical case of chlorosis, was placed on the same diet. She took a meal every four hours, consisting of lean beef, chopped finely, all connective shreds picked out, and the beef-pulp dropped into a pan in a little hot butter, and allowed to cook until the color had changed. The girl improved at once. In a week she was allowed to add half a pint of hot, salted milk to each meal. The milk was to be taken with a teaspoon, to insure slowness of imbibition. In another week, freshly expressed grape juice, and stale bread, well toasted, were added. No medicine of any sort was given up to this time. The improvement was fully as rapid as in the most favorable cases treated by iron. At every visit the girl's eyes were brighter, her lips redder, and her listless apathetic attitude exchanging for the briskness of health.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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ENDOWMENT ORDERS.

THE business of wrecking endowment orders has received a setback in the refusal of Judge Gordon to continue the preliminary injunction, and to appoint a receiver for Tonti.

Judge Gordon said that in consideration of the vast interests involved, the issuing of the injunction had been rather improvident, considering that the plaintiff had not brought forward any proof to sustain his allegations. In view of the statements made in the defendant's affidavits, the Judge continued, and the almost overwhelming protests of thousands of members, and considering the fact that the plaintiff was one of some 20,000 persons interested in the Order, the Court would not only dismiss the injunction, but would be willing to hear an application on the part of the defendants to show cause why the plaintiff should not enter security for costs. Attorney Todd, of counsel for the Order, then made the motion, and Judge Gordon fixed the security at $2000 to be entered within thirty days.

The principle that the member who attempts to wreck a business enterprise involving millions of money, in which thousands of persons are interested, incurs some personal responsibility for his action, is thereby established, to the satisfaction of all. Heretofore the men who amused themselves by "showing up" enterprises into which they themselves had gone, with full comprehension of their principles and eagerness to share in their profits, have thought they were posing as public benefactors. Orders that had been conducted with fidelity and success, that had not lost a dollar, were paraded before the public as fraudulent, and the names of those connected with them dragged in the mire by any notoriety-seeking member or pettifogging attorney, with impunity.

Nevertheless, the agitation has been productive of good; as is usually the case. Hostile eyes have detected flaws in the system; orders whose management was incapable or dishonest have been wound up; one whose system was fallacious went out of business voluntarily; and in others the weak spots were detected and made good. The Home Builders shifted their ground slightly, but enough to place them on the basis that all these orders must occupy if they are to be permanent. The Home Builders now promise the holders at the end of the six years' term the full amount of their certificates, or such proportion of it as their money has earned. If, for instance, at the end of six years there has been five hundred thousand dollars paid in by members then remaining in the Order, and the assets amount to one million dollars, each maturing certificate will receive double the amount of the instalments paid on it, regardless of the face amount. This is a perfectly equitable arrangement, as each man gets back

his capital and its net earnings, which is all that any just man will expect. By no other arrangement can the objection be met, that the first members are paid out of the money belonging to the later members. All enterprises based on that principle rest on very doubtful grounds in point of law, and undoubtedly wrong principles in point of morality. The "getting in on the ground floor," is a bit of pure rascality. It was thought when these orders were instituted, that security was afforded by retaining the right to levy an unlimited number of assessments, but when it comes to assessing members beyond their power of payment, neither the courts nor the public sentiment would permit it. Hence, the ground now occupied by the Home Builders is the only one that is tenable; the only one that secures equal justice to all. While the profits to the individual member may not look as large as under the old rule, they are precisely the same; only that they are equally divided, not concentrated in the hands of a few of the earlier members.

The net result of nearly three years operation of this Order is a profit of about forty per cent.; besides the life insurance that the members have enjoyed, which would have cost them a large sum in any company.

REVISING THE CODE.

WE are in favor of a revision of the Code of Medical Ethics; and believe that much improvement could be done to that antiquated instrument by a liberal use of the blue pencil. There is just one necessary clause to the Code, and that is that the physician should in all cases conduct himself as an upright, honorable gentleman; and all else is superfluous. The legislation for patients, over whom our laws can have no control, is useless; the laying down laws by which our neighbor must regulate his conduct and belief, are distasteful to the spirit of this day and country; and the rules that prescribe for the pretended maintenance of a professional ideal that has not been practicable since the Ptolemies, and sets a premium on dexterity in evasion, are enough to make the profession a laughing stock. By all means revise.

Still, if we must adhere to the old order of things, let us not beat about the the bush, but come out openly and say just what we mean. In this spirit, let us propose a few amendments.

1. Don't advertise; not even to the extent of putting your address and office hours in the newspapers; but nothing in this is to be construed as preventing the publication in the dailies of accounts of wonderful surgical cases, where patients are saved by the superhuman skill of the doctor, etc., etc.

2. Stealing patients from brother chips must be done so adroitly that the plundered brother will be unable to formulate definite charges. Emulate the Spartans, and let your ambition be to steal all you can, without being caught.

Many other amendments will suggest themselves to those who are familiar with the Code, and its practical application.

SPECIAL ISSUES IN PREPARATION.

THE exhaustion of the diphtheria and typhoid fever numbers, and the numerous inquiries for them, render it advisable to issue new specials devoted to these subjects. We will do so as soon as sufficient material has been collected. It is our desire that our readers will contribute to them and other special numbers. There is a vast amount of valuable material to be found in the possession of the practitioner, if he could only be induced to overcome his modesty sufficiently to put his experience in print.

New remedies are brought forward constantly ; but their ultimate fate can only be ascertained from the pharmacist, who tells us he has few or many calls for them. The doctor reads of a new remedy, tries it, and whether it succeeds or fails, no one but himself ever knows. And after all, with him lies the final crucial test; that of actual trial.

ENURESIS.

VAN TIENHOVEN believes the cause of nocturnal enuresis is the complete closure of the prostatic urethra, during the general muscular relaxation of sleep. The urine reaches the urethral pouch and excites the detrusor to contraction. To overcome this he advises the patient to sleep with the pelvis raised by a wooden framework to an angle of forty-five degrees. By this means the urine is to be kept out of the sensitive region.

The explanation is probably true, as enuresis usually occurs during profound sleep, when the muscular relaxation is most complete; and the most approved methods of treatment are those that prevent this heavy slumber. This accounts for the good effects of placing a marble in a belt in such a way as to press upon the spine whenever the patient rolls over on his back. But when it comes to raising the body to an angle of 45 degrees with the bed, it is doubtful if the suggestion could be put into practical use.

Annotation.

BERKMAN.

THEODORE DILLER writes in the *Alienist and Neurologist* concerning the mental condition of Berkman, the man who tried to kill Frick. Diller says Berkman is a paranoiac, and Herr Most says he is a fool. Leaving for future consideration the question of the precise degree of diversity in these views, we are inclined to heartily agree with Herr Most. Diller says :

" In his perverted and weakened mind the doctrines of socialists and anarchists found a receptive soil. But with the morbid exaltation of the *ego*, so commonly observed in paranoiacs, he was not content to serve as a private in the ranks of ordinary anarchists, but joined a 'group' in which each man is, as it were, a leader.

"This great exaltation of self led him to believe that he could in some way solve all the problems of Church and State, labor and capital. So when the name of Frick became known as chairman of the Carnegie Steel Co., Berkman's perverted mind led him to believe that he could become a hero, a martyr and a liberator of the working man by the assassination of Mr. Frick. Acting upon this idea he came to Pittsburg and carefully and deliberately reconnoitered the ground, and, when fully ready, he boldly, coolly, in broad daylight, made his contemplated attempt at assassination. His perpetration of his bloody deed in broad daylight, at the busiest time of the day, when escape was impossible, tallies well with the methods of paranoiacs. He probably did not care for arrest and conviction, if he could only become a hero, a martyr and a notable historical character. After his attempted assassination it is not surprising that he expressed regret only because his bullets had not proved fatal.

"He made no effort to secure a lawyer, or to devise any defense, but prepared an address, which attempted no specific defense of the crimes with which he was charged, but dealt with his favorite subjects of labor and capital, Church and State. A large part of this address was unintelligible and incoherent. No one but a fool could have expected that it would have any weight with a jury. Even with long imprisonment staring him in the face, he preferred to pose as a liberator and to magnify the greatness and importance of himself and his deed.

"Few people were in the court-house at the trial, as its date was kept secret. This, doubtless was, as one of the newspapers aptly said, ' a source of great disappointment to Berkman.' Probably he felt much chagrined that so slim an audience was present to hear such a notable ' address.'

"Had a lawyer been retained in the

case, doubtless an attempt to set up the plea of insanity would have been made. Probably Berkman himself would have most strenuously objected to such a plea as it would have upset all his fine theories of greatness. If the man had been sane he would most likely have retained a lawyer, and then shammed insanity as the only hope of escaping prison."

Watson Smith has added something to our knowledge of the origin of petroleum. He obtained from Japan a specimen of coal, containing ten per cent. of bitumen. Cannel coal contains about one per cent. Fractional distillation of this Japanese bitumen gave first a product resembling benzoline, then one with the odor of coal oil, and finally one that deposited paraffine on cooling ; while the oil drained off resembled American lubricating petroleum. He proposes next to distil off the oil from the coal, when he expects to obtain a residue resembling anthracite. If so, the problem of the formation of petroleum will have been fairly solved.

Truly this age is given over to materialism. In the villa once occupied by Maecenas (*atavis edite regibus*) is located a hydraulic station at which the mechanical energy of the falls of Tivoli is transformed into electricity, that is then transmitted to Rome, to throw a modern light into the hallowed shades of the Eternal City.

Letters to the Editor.

RESORTS FOR CONSUMPTIVES.

CHICAGO.

I WAS very much interested in the special number of THE TIMES AND REGISTER containing articles on Resorts for Consumptives, and especially in the wide range presented—ample, it would seem, for all cases.

We certainly have many places in America where consumptives recover and if the census of experience coincide it should not be very difficult to make a selection. The climate, without question, is the great element in the cure, and the large per cent. of moisture in the atmosphere, whether on the north Atlantic coast or Gulf of Mexico, seems the chief causative factor, in my humble opinion. It doubtless acts in retarding the proper æration of the blood.

In every resort a local atmosphere is produced and I am pleased to find that you enter decided objections against the hospital, hotel, asylum and sanatorium for tuberculous people. I also favor the cottage plan of managing these cases. By that we insure isolation and the tendency to get full benefit of the outdoor air.

There are doubtless many places along the south Atlantic slope, a hundred miles or so back from the ocean, that would prove very beneficial in incipient, as well as in advanced phthisis. The altitude should be over 500 feet at least, but avoiding the higher ridges where the atmospheric changes would be more trying. Catarrhal cases ought to improve or lead a comfortable existence in that section, but the fibrous form, in my opinion, needs a higher altitude to secure the necessary artificial expansion of the obstructed æroles.

The force of this disease seems to be spent upon the lymphatic system and the climate and the food that stimulates this re-absorbent system will cure. I am pleased to see the many articles which bear out the facts emphasized by the census reports that the New Mexico climate is very curative in this disease as the experience of the writers from that territory abundantly testify.

It is my firm conviction that no physician is qualified to teach intelligently on this subject unless he has personally visited the many resorts that are afforded consumptives, for one of the hardest things a visitor meets is the bias of opinions.

The work before the American Health Resort Association is to get at all the facts so as to give unbiased opinions to assist the physicians so that they may help to prevent the enormous mortality from consumption of over a hundred thousand people annually.

T. C. DUNCAN, M. D., PH.D.

WHAT THEY ALL SAY.

I WANT to claim one moment of your time to let you know that I am a constant reader of your valuable journal,

THE TIMES AND REGISTER, and that I like it better than any other journal I have ever taken. I am taking it and *The Medical World*, both of which I cannot do without. Of course, I am taking others, but these are my main stays in the practice of medicine. I find some articles in *The Times and World* that I do not indorse; but, upon the whole, they are good, especially those on special subjects. I have been delighted with the treatment in general. I do think that the treatment for cholera infantum is excellent. I have found an excellent resource in the sulph. carbolate of zinc in that disease. Thanks to you for your valuable editorials, all the time.

A. N. SPURGEON, M.D.

KOSSUTH, IND.

WHY THE PHYSICIAN SHOULD BE AN EDUCATED PHARMACIST.

IF I have enlightened at least one brother physician I shall be amply repaid for the time I have spent in preparing the following.

If all physicians were educated pharmacists there would be very little need of so many manufacturers, and less supplying of the many "elegant" preparations at the sacrifice of their medicinal constituents, and a great decrease in cost to both physician and patient. That the physician could manufacture all of the preparations both U. S. P. and N. F. at a great saving, and be able to cope with the semi-nostrum venders "to physicians only," besides using his own brains, would be for his own good. For instance, we will look at a country physician whose fee is sometimes so small as not to cover the cost of the medicines left, whose medical literature is confined to one paper and sometimes none, but is continually bored by the glib-tongued agent of the manufacturer, and is stocked up at a very high cost.

We will take the following for instance, as an example of the many well known semi-nostrums, which neither the pharmacist nor chemist can prepare after the formula printed on the label. I refer to the well advertised, widely employed so called "chemical compound" antikamnia. I have had just as good results, in all diseases as with the original from a mixture of 1 oz. acetanilid. and ʒj of soda bicarb. and the cost is only 8 cents. The soda salt renders it soluble to some extent, as I make after the above formula, and I find it excellent. I have used the following as an anti-spasmodic, and find it answers every purpose where "Hayden's Viburnum Co." is called for.

℞.—Grd Cramp Bark . . . . . ʒj.
Scutelaria . . . . . ʒss.
Wild Yam . . . . . ʒj.
Grd Cloves . . . . . ʒ
Grd Cinnamon, ana . . . . . ʒj.

Mix and macerate in 12 oz. of 76 per cent. alcohol from 1 to 3 days, then filter and add Tr. cinnamon enough to make 16 oz. The color, taste and smell would deceive the novice and its medicinal action is all that could be wished for; costs about 30 cents. I use the following as a substitute for the well known Pinus Canadensis White.

℞.—Zinc Sulphate . . . . . ʒj.
Glucose . . . . . ʒj.
Water q s. . . . . ʒxvj.

and flavor by adding oil pinus sylvestris, 3 or 5 drops; costs 10 cents, and makes a valuable throat spray, and as an office medicine. Another preparation (Listerine) is well imitated in the following formula Dissolve ʒj benzoic acid and ʒss each of menthol and thymol, ʒij boracic acid in 4 oz. alcohol. Then add to it ʒj borax dissolved in ʒxij of water. The odor of the original can be imitated by the addition of 5 to 10 drops each of oil of gaultheria and eucalyptus; costs less than 30 cents per pint.

Lloyd's Hydrastis, imitated by dissolving 20 grs. hydrastin cryst. in 12 oz. of water and ½ oz. glycerine by the aid of dilute hydrochloric acid; costs 40 cents a pint, and is an excellent preparation for all inflammations of mucous surfaces. I will conclude by giving you a formula and a preparation that is easily made and of excellent merit.

Elix. Phos. Iron Quinine and Strychnine.
℞.—Strychnine alk. . . . . gr. ij.
Quin. Sulph. . . . . ʒ ij.
Citric Acid . . . . . gr. x.

Rub finely in a mortar with ʒiij alcohol and add ʒij of syrup heated to about 150° F. when it will become immediately clear, then add to it 512 grs. ferri phosph. dissolved by the aid of heat in ʒvij of water, when cold filter. It can be mixed

in all acid and neutral mixtures without precipitation.

These are a few of my private collection of formulas which I have used in my private practice, and find them in every particular equal to the original; and I hope as time rolls on that I may give my brothers some valuable additions to the above. Bear in mind that the manufacturer and druggist are not working for the financial gain of the physician but to fill their own coffers. It will be better if they can use their own brains, and not depend upon manufacturers or ignorant mercenary druggists for their supplies.

GEO. STEVENS HAZARD, Ph.G., M.D.
BOSTON, MASS.

CYSTITIS, WITH COMPLICATIONS.

I HAVE taken salol, gr. V, four times daily, for two weeks, and have as yet experienced no perceptible benefit. For rectal catarrh I employ enemas of hot, salt water, and once daily an enema of zinc sulphate and hydrastin. About five times each night I am compelled to rise and empty my bladder; that is, whenever the urine has collected in it to the amount of four ounces. Then the smarting and burning awake me. The urethra is tender and irritable, especially when I urinate. My stomach is nearly always sour, and a good deal of gas forms in it. The urine is highly acid. There is also a prostatic discharge present. The aching in the lumbar region is less since taking the salol. Some tenderness and numbness exists along the spine. For eight months I have refrained from practice, in the hope of securing relief. While at Hot Springs, Ark., I drank about a gallon of hot water every morning. This, and the hot baths, relieved my bladder more than any other remedy, but did not relieve the spinal symptoms. The more water I drink the less I am obliged to rise at night. All my symptoms are worse in wet weather, when I am somewhat rheumatic. The left testicle is atrophied; the right normal.

—J. M. R.

[In these cases of chronic cystitis, with catarrh of the other mucous tracts, little is to be expected from casual prescriptions, but a good deal of relief can be afforded by careful management. No remedy gives more relief than salol. It should be taken one hour before each meal, with a pint of hot water. Let the diet be that urged by Salisbury: finely chopped, lean beef, cooked lightly, with a full dose of calf pepsin, and nothing else. The bladder should be washed out with warm water and a little distilled witch hazel water. As a sedative, to give the rest that is essential, cannabis indica is probably the best.—W. F. W.]

GASTRO-INTESTINAL DISORDER.

I WAS called to see a night operator; a man who had always enjoyed good health; who had attended the county fair four days previously. He had then indulged freely in hotel "hash." He had been much constipated, but had taken large doses of salts, and other purgatives; and considered himself somewhat better. His tongue was covered with a thick, dirty, brown coating, heaviest in the centre. There was some tenderness over the stomach and duodenum; pulse slightly above normal; temperature 100° F.; some dizziness and headache; but no tympanites, tenderness over the left iliac, diarrhœa, epistaxis, or aching of the bones. He acknowledged having also eaten a lot of apples; and the next day his temperture had risen to 101° F.; and the pulse had quickened; but on the following day both were normal. I concluded that the seat of difficulty was the stomach, liver and duodenum; and ordered sodium phosphate, in dram doses, with the following prescription.

℞.—Pepsinæ, ... gr. j
Acidi nitro-hydrochlorici, . . m. xv
Ext. hydrastis fl., ... m. xx
Syrupi aurantii, ... q.'s, ad ʒi
M. S.—Take after each meal.

The patient, however, insisted that he had a fever; and on his own responsibility procured a bottle of "Pierce's Medical Discovery," of which he took large doses, instead of the medicine ordered. Some days later, he visited another physician, who diagnosed the case as "walking fever," and sent him to bed. What is your diagnosis, and treatment? W. F.

[Such attacks of indigestion, with some fever, even more than in this case, are often seen under similar circumstances. Men take much more than their usual exercise, and in an exhausted state eat largely of rich, unwholesome, perhaps decomposing, food. The brown tongue is generally to be seen in such cases. The treatment consists in rest in bed, free evacuation of the stomach and bowels (if there is reason to believe that any noxious matter is still retained), followed by remedies to restore the digestion, and liquid food in small quantities. If the

symptoms continue, the zinc sulphocarbolate is a specific. Your prescription of pepsin, etc., was very well suited for the condition remaining after the irritation had subsided. As the purgation had been accomplished, this was the proper course. As the patient had not followed your directions he could not expect a good result. It is well in such cases to order the patient at once to bed, and put him on strict dietary rules; regardless of his protests. I like to begin by "bossing the ranch," and find less disposition to rebel than when I defer to the patients wishes, or the ideas broached by officious friends. Among such people as you describe, it is "bully or be bullied," and I much prefer to be the bully myself.—W. F. W.]

OBSCURE RECTAL CASE.

THE following case has been in my charge for several weeks, and up to this time I have totally failed to relieve her in any particular. It is a woman seventy-five years old, with good health in general. She complains of a dull, aching pain in the rectum. The pain is so great at times that it keeps her from sleeping. The trouble has existed for over two years. I have used flax-seed enemas, with a pill of belladonna, nux and iron; a combination of rhubarb and cascara; glycerine suppositories, and a tonic mixture, but to no purpose. When the bowels have been moved, she has relief for several hours. There are neither rectal strictures nor hemorrhoids.

W. E. H.

[The symptoms are due to cancer of the uterus or rectum or to ulcer of the latter, or simply to constipation. Examine thoroughly, with the finger, the rectal bougie, and conjoined manipulation. If the symptoms depend on constipation alone, give small enemas consisting of cold, saturated salt water; with aloes and nux internally. If there be extensive impaction, wash it away with large, hot enemas, alternated with the small salt ones or half a pint of coal oil. Ulcer demands the local application of nitric acid. Cancer is the most probable explanation of the case.—W. F. W.]

The Medical Digest.

THE INTERNAL ADMINISTRATION OF OZONE IN THE TREATMENT OF PHTHISIS.

By HENRY S. NORRIS, M. D.

IN a paper entitled Prevalence of Consumption in the United States, read before the Academy of Medicine in New York, by Dr. John S. Billings, of the Army, on January 28, 1892, he gives some statistics of consumption taken from the eleventh census (1890). During that year there were 101,645 deaths from this cause, being a little over 1.6 in 1000 of living population. From reports from districts where the registration of deaths is accurately kept, the death-rate is so much higher than this that allowance must be made for districts where registration is neglected or imperfect in estimating the extent of phthisis in this country. "From these data," continues Dr. Billings, "it is quite safe to assume that the number of deaths due to pulmonary phthisis in the whole country during the census year was over 125,000." "If we estimate the average duration of the disease as two years, we shall have two cases in existence for every death." At this rate of calculation, we have now in the United States alone over 250,000 cases of pulmonary phthisis. Is it any wonder that the number of remedies that have been recommended for this disease is almost infinite? It seems almost a presumption to add to the list, but after several months' trial of ozone in my wards in Charity Hospital I have become more than favorably impressed with it, and I think that the history of my cases will not prove unprofitable and may lead others to venture with more or less confidence to add their experience to mine.

In November, 1891, my attention was called to a preparation of ozone called aquozone, which is a two-and-a-half-volume per cent. solution of ozone in water, the stability of which is maintained by the presence of a certain amount of hypophosphites. I was induced to take some to the hospital and try it for the night-sweats of phthisis. I had in my wards at the time some fifteen or twenty cases in all stages, and from the number selected two for the experiment.

They were both in young women of about the same age, both confined to bed, had been on creasote and cod-liver oil, and were receiving extra diet. They presented nearly the same phenomena, Case II being further advanced than Case I. I began cautiously with the first case, as I had very little confidence in the remedy, and it was not until after two weeks that I ventured to use it on the second case.

CASE I. *Catarrhal Phthisis.*—Annie Q., aged twenty-one, single, United States,

admitted to hospital November 6, 1891. Family history good. Has had a cough for a year, and has been a patient in Bellevue and in Charity Hospital once before, whence she was discharged October 20th. Has lost flesh, and has heavy night-sweats. Cough worse at night and in the morning. Sputum thick and abundant. Has fever in the afternoon and is confined to her bed. Physical examination showed bronchial breathing, voice and whisper over right upper lobe in front and behind, with râles after coughing.

On November 8th she was put upon aquozone, ozonized cod-liver oil, and iron. The aquozone was given in four doses of three ounces each, one before each meal and the fourth at bed-time. The oil, containing six volumes per cent. of ozone, was given half an ounce after each meal. The diet was not changed. In a month the bronchial breathing had almost disappeared, cough and night-sweats had stopped, the patient had gained in weight, and was up and about the ward. She left the hospital December 23d with only traces of the disease remaining.

CASE II. *Catarral Phthisis.*—Lillie S., aged eighteen, single, United States. Admitted to hospital November 10th. Tubercular family history. Has been confined to her bed for a month. Has had a cough for a year, and one attack of hæmoptysis. Has had night-sweats and fever for past three months, worse during past two months. Coughs worse at night and in the morning. Sputum thick, sticky, and abundant. Has lost a "good deal" in weight. Present condition: Patient pale, thin, but not emaciated. Skin hot and dry; respirations hurried. Physical examination revealed consolidation of the left upper lobe, with profusion of moist râles. Evening temperature runs from 101° to 103°, and is above normal in the morning. Treatment on entering the hospital, creasote, cod-liver oil, and extra diet. On November 23d her condition was practically unchanged. She was then put upon aquozone, twelve ounces a day. The first effect was the lessening of the frequency of the cough and quantity of the expectoration. The night-sweats ceased, her appetite increased, she began to pass comfortable nights, and in two weeks she was out of bed. At the end of three weeks there was a perceptible gain in weight, and she had almost ceased to cough and expectorate. She was discharged at her own request on December 14th. At this time there was still bronchial breathing over left upper lobe, but it was tempered with a vesicular quality, and the râles had almost disappeared.

These two cases convinced me that I was dealing with a powerful and useful agent. The rapid and immediate improvement following the administration of ozone encouraged me to continue the experiment. I began at once to apply it to various forms and stages of phthisis—from the mild cases with recent consolidation to those with cavities and tubercular diarrhœa. I did this with the object of discovery, if possible, what the limit of utility was, to find out what classes of cases responded to the treatment, and to notice its effects even upon those where any treatment must be useless. The remedy was always given in the same manner, viz: Twelve ounces of aquozone a day in four doses, one before each meal and the fourth at bedtime. An ounce and a half of ozonized oil, being half an ounce after each regular meal. It was not used in all the cases in the wards. Others were kept upon creasote and cod-liver oil in order to compare the two plans; but those upon the ozone seemed to do so much better than the others that I was frequently besought by these to be put upon the new treatment.

In reporting these cases I have given both my failures and successes, and I have endeavored to be accurate without going too much into detail. It is no part of my desire to bring forward a specific for pulmonary tuberculosis. There is, in all probability, no such thing in existence. I simply wish to add to the therapeutic measures at our command another, that has seemed to me to be worthy of further investigation. That it has not always succeeded is not to its discredit. Its use has, in some of the cases above cited, at least been coincident with an improvement when none occurred before, and wherein all the incidents and circumstances had been the same, with the single addition of ozone. The repetition of these coincidences offers good reasons for giving to this agent at least a fair amount of credit.

If the plan oulined in this series of ex-

periments could be carried still further; if, in addition to less crowding and better food for our patients, we could keep them in an atmosphere containing a certain and constant amount of ozone—the quantity to be determined by experiment—might we not hope for better results than are now attained in ordinary hospital practice? The poor cannot be sent to congenial climates and pure atmospheres, but, by force of necessity, are crowded into hospitals whose walls and floors are too often saturated with emanations from previous generations of unfortunates.

In what way ozone acts when administered by the stomach I do not know. Whether its effects are expended upon the forces of digestion, and in that way influence nutrition, or whether it is absorbed as ozone, I am not prepared to say. But, from its rapid effects upon the secretions in the bronchial tubes, it seems as if it may find its way into the circulation. It is for this reason that I give the ozone water as nearly as possible on an empty stomach.

The cases in which it has proved most successful in my hands have been in persons under thirty-five years of age with catarrhal phthisis, where the disease has not passed far into the second stage, has not been too active, and has been limited to a single lobe, or, if in both lungs, has been confined to comparatively small areas. In every case where these conditions existed the patient's improvement was immediate and progressive.—*New York Medical Journal.*

[It will be noticed that the cases number 3, 6, 7, 10, 11, 12, 13, 14 and 15 are not here given, as there were no favorable results obtained, the disease, in each case, being too far advanced to hope for cure. Two of them, however, were not quite hopeless and were still under this treatment.—ED.]

INTERRUPTED AND CONVERSION METHOD OF TREATING MALARIA.

WHETHER a separate poison is imbibed by the system to create these distinct types of fever, is not before us just now for argument, but every physician or person at all familiar with malaria and its antics, is aware of the fact, that in some sections we have distinct agues, ending in fever and sweat, and in other sections there is an apparent immunity from agues, but an adaptability to the remittent and continued types. Any departure from a pure air is liable to create disease in those who are very susceptible, if that air is respired sufficiently long; but to create that which we pronounce the various algid types, there must be some peculiar or specific poison pervading the air. Certainly, we all fully recognize and appreciate this, when we examine the eruptive diseases. Indeed, every disease is a disease unto itself, with its peculiarities and operating causes, as much so as the various types of mankind; and it is only by a commingling of the poisons, and antagonism, that an interruption can take place.

A typically pure air, Dr. Joseph F. Edwards tells us, is as follows: "Seventy-nine per cent. nitrogen gas, twenty-one per cent. oxygen gas, watery vapor, and amonia." This, he says, "is ideal atmospheric air."

It strikes us, that if our chemical and scientific knowledge has placed us so far upon the road of hygeia, and her miracles, we are fast approaching a point where we can evolve a something which, while not yet tangible, may sooner or later be named and weighed by the scales of an exact science. If we know positively what a pure, living air is, we certainly will be, in the course of time, able to state its variableness, together with the special adulterants. Professor Flint, of New York, in his "Practice of Medicine," says: "The causation of intermittent fever involves a special morbific agent, commonly known as malaria." We will suppose, also, that this distinguished scientist refers remittent and continued fevers, when existing in malarial regions, likewise to special morbific agencies, either as a unit originating several types, or each type with its own special poison or micro-organism.

While it is true that all persons living in a malarious climate are to a certain degree familiar with this "bad air," or miasm—which are synonymous with malaria—we know as little about the agencies at work in causing the fevers and cachectic states of this disease as the names representing it imply. We call it swamp fever, hæmorrhagia and hæma-

turia, and claim that some peculiar miasm comes up from the marshes, enters our system, undergoes a zymosis or fermentation, ending in chills (ague), fever, and sweat, and taking on both a continued and periodic form.

The ague or chill type, ending in fever and sweat, is the explosive form. The remittent and continued is the passive or non-explosive.

Who would not prefer to live in a section of country peculiar to the regular chill or explosive type to one in which the malaria enters the system to harass and annoy, making sallow and muddy your complexion, running you down, ending in regular continued fever or a melancholic, cachectic constitution?

My argument is, then, that we have two kinds of swamp fungus, or malarial poison. In the explosive or chill form we can feel assured we will have a good shake, fever, and sweat. Nature is at her best here in breaking up this poison. When a sufficient charge is introduced an explosion follows, and all the organs are violently excited and agitated. Reaction follows, and then come the fever and sweat. Great quantities of the poison are eliminated through it. A calomel purge and a few doses of quinine, given at the proper time, destroys this monster.

In the other type (the passive) there is a slow, insidious, deceptive "lying in wait." A large percentage of the members of a family feel badly under this influence, and are under the doctor's care most of the time. When they first come into the section they may be in blooming health. Wait, and they will find there is some unseen poison at work.

In the fall of 1886, the few physicians living at Roanoke, Va., had their hands full of malarial fever patients. Among the number I had two patients very ill with malarial fever. I treated them in the usual manner, one being very much benefited, but the other in the fifth week decidedly worse. I used from ten to twenty-five grains of quinine with each patient daily. My patients were Charles and William L——, the latter of whom was gradually getting worse.

Early one morning I was called up, and found him very ill—temperature, 107½° F.; pulse, 150. There was a whistling, rapid respiration; skin parched and arid; entire suppression of urine. I concluded to interrupt and advance this case. I threw the cover off, the window being open, until the patient was chilly. In the meantime I was getting hot water sufficient to fill a large new tub. I put the young man in this water, covering him up with blankets, only leaving his eyes and nose exposed. He remained in this tub of hot water fully half an hour, but his body and head were supported, and hot water was added from time to time. He broke into a tremendous perspiration. I ordered a drink of whiskey and digitalis, and, as he was about to faint, had him taken up and put to bed, wrapped in the blankets, with an extra dry one. He remained in these blankets until everything was sweat. Meanwhile I had his body rubbed at different points with hot, dry towels. I then commenced quinine again, giving him fifteen-grain doses every two hours for three doses. At 4 P. M. that day his fever left him, and I am glad to say he never had any recurrence.

Charles E——, cashier of the Roanoke Savings Bank, and brother of Mayor William O. E——, was taken sick this same fall, starting in with high fever, but no chill, which portended malarial fever. I pursued the same course with him, breaking up his fever. Both of these gentlemen have had good health ever since.

I will say in conclusion, that in the case of William L—— I did not use the quinine until the suppression of urine was overcome, having free diuresis and the skin in full perspiration. Had I used quinine before these emunctories were freely aroused, I would have killed my patient. I have made it a rule ever since, when cases are obstinate, to use the interrupted and conversion method.

Those living in that section where the second form of poison prevails should try the interrupted and advanced method. To interrupt and advance, you convert the second (passive or non-explosive) type into the first by reducing rapidly the temperature and chilling the body; then, by using the hot bath, you bring on a sweat. You must exercise judgment, of course, and be ready with stimulants and other supporting measures. Then is the

time to make quick but useful use of quinine.

N. B.—You can chill and make your patient shiver by a few cold blasts from a hand bellows, or chill by placing your patient between ice sheets for a few moments, and then quickly putting him in a hot bath. Be careful in using coal-tar products, if at all.—Gray, *Medical Record.*

Botkin's Drops.—In Russia they use extensively for Cholera a mixture known as Botkin's Drops. Here it is :

℞.—Liq. anod. Hoffmanni,
Tr. cinchona co., ... aa ℥j.
Quininæ mur., ... ℥j.
Acidi mur. dil., ... ℥jss.
Ol. menth., ... gr.ss.
M.

It is a simple tonic and stimulant, more likely to be of service in the third stage than the first. The hydrochloric acid it contains may have specific effect, for many medical men of great experience in cholera have a strong belief in the use of mineral acids, especially during the first stage in light cases. We may sum up the most approved medicines, therefore, for the period of diorrhœa and vomiting as the mineral acids, opium, and tannin. Calomel, a former specific, appears to be under a cloud.—*Medical Review.*

Dermatol in the Treatment of Buboes.—Mehdi Bux, a Mahomedan male, age 34, had had an attack of sloughing chancres about two months previously, which was soon after followed by a swelling and tenderness of the groins. He informed me that he had consulted a native practitioner who had supplied him with some medicine to be applied to the ulcers on the penile organ, and also some tincture of iodine for the glandular swellings. The ulcers healed in a few days under this treatment; but the glands suppurated and broke down. All forms of dressings were applied after free incisions had been made, viz. iodoform, carbolized oil, bichloride of mercury, poultices and oxide of zinc ointment, as far as I could gather. At the time when the case was seen by me, the open surfaces on the groins showed no intention to heal, they were each almost three inches in length, and about an inch in breadth, sides undermined with a peculiar bluish tinge of the granulations on the base, surface almost dry.

Fortunately, a small quantity of Dermatol was obtained from a local chemist and was used as a dusting powder, and I placed the patient on a slight tonic treatment, as his constitution had much broken down, with the result that, in a fortnight's time the ulcers had almost healed.—H. W. Foscholo, in *Medical Reporter* (Calcutta).

Phagedena. — Supposing a patient presents himself with a sore on the penis, said to have been contracted very recently, from immoral sexual intercourse, the surgeon exposes the parts and examines the ulcer very carefully in the light by the aid of a magnifying lens, and he feels the margin of the ulcer by the aid of his fingers very delicately with a little pressure. It is needless to say that it is necessary to carefully wash the fingers after the examination, using a nail-brush and taking all other previous precautions that are necessary, such as cutting the finger nails, &c. On careful examination he finds not infrequently two or more such ulcers on the genitals. If by the above methods he finds that the ulcer or ulcers, as the case may be, is or are non-indurated and pus-secreting, with abrupt margins, with cut or punched-out edges, with a grey, unhealthy surface with much surrounding inflammation, and along with that the presence of enlarged lymphatic glands in the inguinal region, with suppuration both within and around the glands, if the case has so far advanced he may be tolerably certain that it is a case of soft chancre. But if he is pressed to give a diagnosis of the case and the patient has had no syphilis before, he should never give it. If he is allowed the opportunity to watch the case from that time till the full development of the process, which will not take less than two months, considering operative interferences if there be suppurating buboes, dressing the wounds and the ulcer or ulcers with iodoform and carbolic lotion 1-40 &c., in the meantime, he may arrive at a good diagnosis. Now if it is a case of simple "non-infecting sore" which is ordinarily called "soft chancre" the ulcer will heal up and the buboes also by such

treatment, if there be no complications it will never be followed by any secondary manifestations as in the case of true syphilis. It is quite possible for a patient to suffer from non-indurated sores and suppurating buboes without having subsequently any constitutional phenomena.

It is tolerably certain that the *soft* variety always precedes the *hard*, *i. e.*, the soft often proves to be infecting. An infecting sore may often cause suppuration of the glands, and a non-infecting sore may be followed by a moderate enlargement of the glands of the inguinal region.

Though Dr. Hutchinson has failed to record a single case from his own practice, of phagedena affecting a non-infecting chancre, yet he strongly believes in the possibility of such an occurence. The brief and accurate description of phagedena is as follows: It is an ulcer which rapidly extends in depth and in area. The edge of this peculiar ulcer presents marked irregularities as if it had been "eaten away by a mouse." On minute examination the surgeon observes minute points of white and black slough, on the surface of this ulcer. These phagedenic sores are usually very painful, and are always liable to bleed, and sometimes the hæmorrhage is very profuse.

There is another variety of phagedena which is named *Hospital Phagedena*. It is very dreadful and spreads through the hospital, and may attack all operation cases as also other wounds. This type of phagedena is believed to be started by the accidental admission of a syphilitic phagedena into surgical wards. The peculiarity of this type of inflammation is, that it is unquestionably contagious as regards other individuals as well as to the patient himself, (self inoculable) and by this means it always spreads rapidly. It is very persistent and destructive, destroying all the tissues that come within its reach. It sometimes destroys the whole of the penis and it is sometimes fatal to young prostitutes. It is more apt to occur in sores which are concealed in a place where secretions are retained and lodged for some time unnoticed, allowing thereby fearful decomposition and destruction. Now of true or infecting chancre, which if carefully diagnosed, will materially help the surgeon to pronounce a patient syphilitic or not. The infecting or hard chancre is the local manifestation of syphilis. The virus of syphilis, therefore, has developed into the patient's system, and local treatment is useless.

—Ghosal, *Calcutta Med. Reporter.*

Book Notice.

"PHYSICIANS LEISURE LIBRARY." *Acne and Alopecia*: By L. DUNCAN BULKLEY, M. D. Published by Geo. L. Davis, Detroit, Mich., 1892. Price, 25 cents.

This treatise, by the physician to the New York Skin and Cancer Hospital, is fully up to the standard of the treatises contained in this valuable series. It makes the first volume of the seventh series, is provided with a formulary, and with a good index.

THE *U. S. Pharmacopœia*, "*1890*," which will be published during 1893, adopts in great measure the METRIC SYSTEM of Weights and Measures, this will doubtless create much confusion in the minds of physicians and druggists, and lead to many misunderstandings and errors. In order to provide a guide to the proper dosage, etc., Dr. Geo. M. Gould, author of "The New Medical Dictionary," has prepared a very complete table of the official and unofficial drugs, with doses in both the METRIC and ENGLISH systems; this table is to be published in P. Blakiston, Son & Co.'s Physicians' Visiting List, for 1893, together with a short description of the metric system.

ATLAS OF CLINICAL MEDICINE. By BYROM BRAMWELL, M.D., etc. Volume II., part I., Edinburgh. Printed by T. & A. Constable, at the University Press, 1892.

The present part treats of the following subjects: Scrofula, unilateral hypertrophy of the skull, measles, two cases of Freidreich's ataxia in which the knee-jerks are not lost, alterations in the fields of vision, their clinical significance and importance, permanent hemianopsia and temporary hemianopsia (illustrative cases). There are ten plates in this part. The first, (No. XXXI.), represents a case of scrofulous diseases of the skin and superficial glands. While

the author admits the dependence of these lesions upon the tubercle bacillus, he does not say that any search for it was made in the present case. Nor does the brief resumé of treatment contain much more than an allusion to the methods rendered appropriate by that view of the pathology. In dealing with local lesions his indications are (1) to remove local irritation and secure rest; (2) evacuate pus, antiseptically; (3) thoroughly remove tubercular foci; (4) promote absorption by the use of iodine.

Two engravings illustrate the osseous lesions in Hutchinson's and Thomson's cases of unilateral hypertrophy of the skull. The article on measles is classical; the diagnosis being very fully considered. The section on alterations in the field of vision is the most important and carefully prepared in the present part. It is illustrated by four plates.

This valuable work can be obtained from the publishers, at the ordinary subscription rate, £1, 11s., 6d., for the volume of three parts. This includes carriage, but not the customs duty.

LEONARD'S PHYSICIAN'S POCKET DAY-BOOK. Bound in Red Morocco, with Flap, Pocket, Pencil Loop and Red Edges. Price, postpaid, $1.00. Published by THE ILLUSTRATED MEDICAL JOURNAL CO., Detroit, Mich.

This popular day-book is now in its fifteenth year of publication. The front part of it is occupied with dose tables and other useful pocket memoranda. It is good for thirteen months, from the first day of any month that it may be begun and accommodates daily charges for 50 patients, besides having cash department, and complete obstetric records There are also columns for the diagnosis of disease, or for brief record of the treatment adopted, following each name-space. Name of patient needs to be written but three times in a month. The book is 7½ inches in length, and is 3½ inches wide, so that it will carry bill heads or currency bills without folding. It is bound in flexible covers and weighs but five ounces, so that it is easily carried in the pocket

THE Thanksgiving number of *Table Talk* has arrived among our exchanges. It is quite up to the season's requirements; indeed it would be a difficult matter to run over its columns without an increased longing for an interview with those Siamese twins of Thanksgiving—turkey and pumpkin pie. Published by the Table Talk Publishing Co., 1113 Chestnut street, Philadelphia.

News and Miscellany.

THE DRUGGIST AS PURVEYOR.

YE druggist of the "Olden Time" would stand aghast to-day at the revolution effected in pharmaceutical methods. He delighted to watch the percolators, filters, etc., of his calling in the preparation of various compounds; in filling the prescriptions of physicians who used infusions and decoctions, who prefered the bulky as well as ill-looking and worse-smelling productions of their youth to the elegant products of to-day.

The druggist has become, in a great measure, a purveyor of medicines. In these fast times people will not wait long for a preparation which is immediately needed. If a physician prescribes gelatine-coated or sugar-coated pills, they must be at once forthcoming. The same may be said of all the dry Galenical preparations. Any one who has seen the machinery necessary for the proper making of compresed tablets alone, will perceive that no ordinary drug store could undertake the purchase of the same.

The manufacturing pharmacists who furnish the ready-made products have made a business of this; and, provided with an enormous capital and meeting with a large market, they are enabled to supply the demand with elegant products, accurately dosed. These products are certainly more reliable, because the manufacturers make it a point to secure the crude materials in the best possible state and they use all at once. They do not have their crude vegetable products lying in musty drawers becoming inert and losing all their properties. As a natural consequence the finished product is more reliable in addition to being put up in much better shape than any possible extemporaneous method. We can readily see that no manufacturing firm could possibly attempt to put up all the products that are called for.—*Weekly Medical Review.*

REPORT OF THE N. Y. STATE BOARD OF HEALTH.—The 9559 deaths reported during September, represent an average daily mortality of 319, against 352 in August, and 322 in September, 1891. The infant mortality is 31 per cent. of the total mortality, that of August being 45.2, and of September, 1891, 41.2 per cent. The entire zymotic mortality is 2266 against 3182 in August, and 2388 in September, 1891. From diarrhœal diseases there were about one-half the number of deaths of the month preceding, and a smaller number than in the corresponding month of last year; they still constitute more than 13 per cent. of the entire mortality; over one-half of the deaths occurred in the maritime district. Typhoid fever has increased by about 100 deaths, which is not above the customary. Scarlet fever shows no material variation, having decreased very much since the last two months; outbreaks are reported from High Falls, Adams and Stratford, Fulton county. Diphtheria has caused 100 more deaths than in August, which increase occurred likewise last year; Gaines, Port Henry and Hoosick Falls report its prevalence. Three deaths from small-pox are reported from Long Island City. Cases of suspected Asiatic cholera in North Tonawanda have been proven not to have been of that nature, on bacteriological examination. The rural portions of the State, out of 1774 deaths, had 407 deaths from zymotic diseases, or nearly 23 per cent., which is but a little lower than the proportion for the cities and villages. Of these 68 were from typhoid fever and 42 from dyphtheria, a percentage, respectively, of 3.83 and 2.37 of the total mortality. The urban population shows a percentage of 1.46 for typhoid fever, and 4.20 for dyphtheria of the total mortality, showing a large preponderance of the latter in the cities, and a small in the country, as compared with the total mortality. The mortality for consumption is the same as in the month preceding.

MEXICO FOR CONSUMPTIVES.—Fourteen years ago I was obliged to leave the northern part of the United States to look for a climate in which I could live, for what was diagnosed by the best of authority, pulmonary tuburculosis. I remained a number of those years on the border of Texas, and found some localities excellent. But in none of them have I ever reached a climate that seemed to me equal to this, here in Silao. Even in this part of Mexico, I know of no town so favorably located. Here, the temperature varies but a few degrees night and day. Probably not averaging more than five degrees Farenheit. Usually, the mercury registers about 80. In consequence, a person might easily live out of doors the year round, and feels like doing it. Guanajuato, Aguascalientes, Zacatecas are all approximately near by, but none but what have objections that Silao does not have. And as to the City of Mexico, the climate will not for a moment compare with this, though of course otherwise much more preferable as a place of residence.

To revert again to myself, which I trust you will pardon, I laid in bed in Tampico with bronchial hemorrhages every day for thirty consecutive days last August. The last day I was there I had three hemorrhages. In that condition I was carried on a cot to the train, and on the evening of the second day I stepped off the train in Silao. In eighteen hours after leaving Tampico I had been raised six thousand feet, where I have since remained. One month after my arrival I felt as well as though I had never been sick, and to-day, to all appearance and feeling, am in perfect health.—*Texas Sanitarian.*

DISEASES OF OLD AGE.—I have taken the reports of the surgeons of the five largest National Military Homes, and my own observations during several years' service in the largest home. These five homes have an aggregate membership in round numbers, of twenty thousand old soldiers, the average age of whom is about sixty-five The total number of deaths at these homes occuring during the year ending June 30th, 1891, was 950. Selecting some of the principal causes of death they are as follows:

Heart Lesions	151
Pulmonary Tuberculosis, including Fibroid Phthisis	122
Cerebral Hæmorrhage	67
Senile Debility	62

Cancer	36
Bright's Disease	37
Pneumonia	37
Meningitis	20

—Grube, *St. Louis M. & S. Journal.*

THE ADDRESS ON MEDICINE BEFORE THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—In the Address on Medicine, of Prof. Hobart A. Hare, it was interesting to note the vigorous assaults of the author on the tenets of time and the established rules in medicine. He asserted that, though one of the first and most oft-reiterated recommendations for the treatment of anæsthetic narcosis was the application of one Faradic electrode to the phrenic nerve and the other to the epigastrium, this was not only powerless to do good, since the phrenic nerve was really not excited in such cases, but harm was liable to result from electrization of the pneumogastric nerve resulting in inhibition of the heart.

Delusion No. 2 was the inversion of a patient, under the same circumstances. This was, he said, justifiable only in cases of heart failure, not of respiratory difficulty. In the latter case, inversion of the patient, especially if the subject of augmented abdominal contents, such as tumor, etc., was likely to cause increased difficulty in breathing, from the increased pressure on the diaphragm and respiratory apparatus. A to-and-fro, flapping motion indicated respiratory embarrassment.

It was well established that anæsthesia caused loss of heat and materially lowered the body temperature of patients; and yet it was not at all common for operators to make provision for the maintenance of this absolutely necessary element during operations of magnitude, or consuming long periods of time. A moderate amount of artificial heat should be supplied under such circumstances. If too much, undue heating of the body would result; if too little, no benefit would be derived.

One suggestion offered, and in which we are able to coincide with emphasis, is with regard to the use of strychnia hypodermically in large doses, in cases of collapse or shock. One-twentieth of a grain was to be administered hypodermically every half hour until reaction was obtained; or one dose of one-fifth grain could be given.

The position of the head, neck and tongue, in anæsthesia, was claimed to be of much importance. In necrosis, when the tongue was drawn out of the mouth and forward over the lower teeth, rather than close under the upper teeth, much greater freedom to the entrance and exit of air was afforded; and this was still further added to if a sharp hook were fixed in the base of the tongue and drawn forward. The head should be thrust somewhat forward, in the position assumed by a runner of a race; this straightened the air-tubes.

For short operations, requiring only transient anæsthesia, bromide of ethyl (not bromide of etheline) was highly recommended by the essayist. Ergot was said to be entirely lacking in power to afford benefit in case of pulmonary hemorrhage; and morphine, a drug also commonly prescribed for that symptom, would induce an increased flow of blood, since it would stimulate the heart and vaso-motor nerves. A contrary (and therefore a beneficial) effect could be expected from the use of chloral, the bromides, aconite, and cannabis indica.

The inhibitive influence of acids on the growth of micro-organisms in the alimentary tract, was commented upon, with a hint as to their value, on that account. in intestinal disorders whose microbic origin is now quite generally admitted.

The value of entero-clysis and hypodermatoclysis in the toxæmias, such as uremia, septicæmia, diabetic coma; in hemorrhage; and in cholera and cholerine, etc., was dwelt upon. Enemata were advised in two conditions of intestinal obstruction, intussusception and impacted fæces. They should be administered slowly and gradually, by fountain apparatus (not by a syringe), a pressure of from one to five pounds being used. The temperature of the fluid used should be from 101° to 103° Fah.

In closing the author mentioned the request of the Hyderabad Commission that he should pursue investigations into the subject of anæsthesia, such investigation to be from an American standpoint. He desired information with respect to two kinds of cases; those in which respir-

ation failed before there was cardiac failure, and cases in which there was cardiac failure before respiration was involved. Reports regarding either of these will be gratefully received from any of our countrymen by Dr. Hare.—*Med. Fortnightly.*

USEFULNESS OF ERGOT IN OBSTETRIC PRACTICE. — Post-partum hemorrhage, except as the result of retained pieces of after-birth or clots, is exceedingly rare, and the uterus can only be aroused to proper contraction with sufficient promptness by the use of pressure, and the introduction of the hand, with or without some irritant substance, such as a sponge or cloth dipped in vinegar, a lemon, or a piece of ice. These methods will produce contraction of the uterus much more promptly, and much more safely, than can ergot; whilst those rarest of rare cases, in which ergot would be indicated to produce tonic contraction of the uterus following its contraction from the use of the methods named, are vastly overbalanced by the harmful results following the routine administration of ergot at the end of the second stage or during the third.

If a preparation of ergot could be secured that would be at all times thoroughly reliable, and if personal idiosyncracies in regard to its use were not so common, it is probable that a dose could be found of the drug which would simply serve as an adjuvant to increase uterine contraction which should not go beyond the danger line; but unfortunately the reverse of all this is true.

During the early years of my practice, I always carried ergot to obstetrical cases, and administered the drug according to the indications laid down in the text-books; but on the 21st of January, 1878, as a result of giving an ordinary dose of Squibb's fluid extract, I had most violent tetanic contraction ensue, which caused a badly ruptured perineum. This led me to a very careful review of the entire subject of the administration of ergot, as a result of which I ceased entirely to administer it as an oxytocic, though I still gave it at the close of labor to prevent after-pains and to secure contraction. This I continued to do for some time, carefully studying its effect, and giving it with less and less frequency, and for the last ten years I have not given a single dose of ergot in obstetrical work, nor even carried it with me.

Ergot will unquestionably, in my judgment, obviate to a certain extent after-pains; but for reasons which I have already given this use of it is not devoid of danger.

During these ten years I have, of course, had my share of cases of post-partum hemorrhage, but I have been able to control them all most effectually by some of the means which I have already alluded to, and have in no case had cause to regret the non-administration of ergot. I, therefore, believe sincerely that owing to its unreliability and danger, and our possession of other means and agencies for the accomplishment of the desired results, ergot should be banished utterly from the lying-in chamber.—Baldwin, *Columbus Medical Journal.*

MURPHY'S BUTTON.—As a result of thirty-five experiments upon dogs, Dr. Murphy came to the conclusion that he could perform cholecyst-enterostomy in the human subject by coaptating the visceral surfaces by means of a new mechanical device of his invention, with safety and advantage.

The result of its employment in a case of biliary obstruction, requiring the establishing of anastomotic connection between the gall bladder and the intestine, was so satisfactory that he has since extended his experiments to anastomoses of the different hollow abdominal organs. He has found that he can with equal facility utilize the method in performing end to end enterorrhaphy as well as lateral intestinal anastomosis and gastro-enterostomy.

The device consists of two brass buttons or plates, each with a peripheral collar and a central hollow stem; the hollow stem of one being slightly smaller than the other, so it will readily slip within the other: Three sizes were used with diameters of ¾, 1 and 1¼ inches, with central openings of about ¼, ⅜ and ½ inches, respectively.

In making an anastomosis or enterorrhaphy a puckering or retaining suture is placed through all the coats around each

opening, and after the shoulder of half the button is pushed through each of the openings the suture is drawn taut, so as to prevent the viscus receding from the button. Then the operation is completed by pressing the two halves together. A clever little device on the smaller stem retains the buttons in permanent apposition.

The two collars thus hold the peritoneal coats into accurate and constant coaptation. In circular enterorrhaphy a stitch is first taken at each mesenteric border, so as to provide a complete peritoneal covering for the whole circumference of the bowel.—*Chicago Clinical Review.*

Treatment of Flat-foot by Plates.—This, which is by far the best form of flat-foot apparatus, consists of a thin sheet of metal fitted accurately to the sole of the foot and worn inside the shoe, generally outside the stocking. These plates differ among themselves: (1) In their mode of manufacture; (2) In their shape; (3) In their material.

For all kinds of plates a mould or pattern of the foot must be taken. Whitman [20] has a most elaborate method for this, by which he first takes two plaster shells of the upper and under surfaces of the foot, adjusts these together, and then by filling up with plaster gets an exact production of the foot, which he sends to the foundry and has cast in iron. Upon this model the plate is forged from the best twenty gauge steel.

A much simpler method is to flow plaster-of-Paris into a shallow trough, and when it is about to harden to have the patient step in it. In this negative a positive of the sole of the foot can easily be run.

A most ingenious method was introduced by Dr. F. B. Harrington, of Boston. He first marks out on the foot by means of a camel's-hair brush wet with a mixture of ink or glycerine the shape of his plate. Next a piece of Canton flannel is pressed against the foot. In this way the shape is marked out on the flannel. The flannel is then cut out, soaked in plaster-of-Paris, wrung nearly dry, and applied to the sole of the foot to harden in position. When this shell is dry it is taken off, its concave surface (corresponding to the foot) filled in with fresh plaster, and when hard sent to the machinist, who uses it simply as a model to which to fit his plate. The thickness of the flannel is equal to that of the stocking outside of which the plate is to be worn.

The method used by the writer is similar to this, only sheet wax is substituted for the flannel. Such wax can be had at dental furnishing stores. When put into hot water it becomes perfectly supple, and can be moulded to the foot and cut to the desired shape. As it cools it grows hard again, and can be greased and backed with plaster on either side according as a negative or positive model is wanted. The advantage of this method is, for ordinary plates, its speed and cleanliness; while for rubber plate negatives it leaves the model much smoother and allows for the extra size needed.—Dane, *Boston M. & S. Journal.*

Treatment of Typhoid Fever by the Soluble Products of the Microbes of Putrefaction.—A Polish physician, A. Chelmonski, asserts that he has had good results in the treatment of typhoid fever by the following method: Take equal parts of lean beef and water and expose them to the air for seven or eight days; when putrefaction has set in boil for one or two minutes and filter carefully. Either this liquid may be used, or an extract made by drying it. Injections in men provoke at the end of five to eight hours a febrile reaction which lasts 24 to 36 hours and is accompanied with somnolence, cephalalgia, muscular pain, chills, then a sensation of heat, and perspiration. When used in typhoid fever patients there was considerable lowering of the temperature, abundant sweating, disappearance of the diarrhœa, rapid amelioratian of all the morbid symptoms, return of appetite, etc. The augmentation in the volume of the spleen sometimes persisted some days even after the defervescence. The dose of the dry extract was 1 to 8 mgm. ($\frac{1}{65}$ to $\frac{1}{8}$ gr.); of the liquid, 10 to 50 cgm. (1½ to 7½ gr.), given daily by hypodermatic injections. — *Med. Abstract.*

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ORIGINAL ARTICLES: PAGE.

COMPATIBILITY OF CONSERVATIVE AND AGGRESSIVE SURGERY. By J. McFadden Gaston, M. D..... 553

SOME NOTES ON THE CORNEAL ASTIGMATISM IN TWO HUNDRED EYES MEASURED WITH THE OPHTHALMOMETER OF JAVAL, IN COMPARISON WITH THE TOTAL SUBJECTIVE ASTIGMATISM AFTER COMPLETE MYDRIASIS. By G. E. de Schweinitz, M. D..... 558

A CLINICAL DESCRIPTION OF DYSENTERY AS IT OCCURS IN NICARAGUA. By Judson Daland, M. D..... 563

LECTURES ON THE TREATMENT OF HEPATIC AFFECTIONS. By Dr. Dujardin Beaumetz..... 566

ANNOTATION: PAGE.

Parasitism. *S. V. Clevenger*..... 570

Habit Chorea. *S. V. Clevenger*..... 571

Vaccination Pays. *E. C.*..... 571

Dreary Reading..... 571

EDITORIAL:

TREATMENT OF SYPHILIS..... 572

ELIMINATION OF TOXIC AGENTS BY FREE PERSPIRATION..... 574

LETTERS TO THE EDITOR:

Eczema with Angina Pectoris. *G. W. Story, M. D.*.... 575

Queries. *G. H. A.*..... 575

Cholera in Antwerp. *T. C. Sangree, M. D.*..... 576

NEWS AND MISCELLANY.....576

NOTES AND ITEMS.....iv, x

Original Articles.

COMPATIBILITY OF CONSERVATIVE AND AGGRESSIVE SURGERY.

ANNUAL ADDRESS BEFORE THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

BY THE PRESIDENT, J. McFADDEN GASTON, M. D.

ATLANTA, GA.

THE circumspect philosophy of former days taught us, what man has done man may do. But the developments of more recent times say, whatever is practicable may be undertaken, without regard to precedents. Conservative and aggressive processes are combined in progressive surgery.

Conservatism in the use of all the appliances of surgery is not inconsistent with the application of the most energetic means of relief in structural disorders. A misapprehension exists with many of our profession as to the true sphere of progressive surgery, and it is my purpose on this occasion to make a distinction between rashness in the employment of operative measures and boldness in the use of surgical means of relief when clearly indicated. Real advances in surgical practice have not been the result of cutting and slashing without due consideration, but have accompanied painstaking investigation of the conditions requiring the knife, and caution in the performance of operations. As a preliminary to any surgical procedure of a radical nature, correct diagnosis is essential, but to accomplish a proper understanding of a deep seated disorder it is often requisite to make an exploratory operation of greater or less magnitude.

The information based upon such an exploratory measure serves as a guide to any further surgical procedure. A verification of any complication, of a serious nature, by an exploratory step, may form a contra-indication for the more radical operation which has been contemplated. A great variety of means have been employed under the expectation of elucidating the doubts surrounding very obscure cases, some of which are of a precarious nature, proving far more hazardous than the disease or the proposed radical measure. It is evident that exploratory processes of this order should be ruled out of our surgical resources, and the prime consideration for our safe guidance in the exploratory operations is to be sure that the existing disorders shall not be aggravated by such procedure, nor that other graver developments shall be induced as a consequence of it. It is best always in cases involving mooted points to avoid the appearance of evil. In keeping with this precaution against the abuse of exploratory measures, it is proper to exercise great discrimination in the use of antiseptics in surgery. A most salutary result may be obtained by em-

ploying very active germicides in a case of septile contamination, whereas the same application may not be suited to an operation upon tissues in their normal state. It is now recognized by bacteriologists that certain preparations tend to destroy pyogenic organisms, and when they exist the use of such antiseptic means is indicated. On the other hand it is becoming fully understood by clinical experience that a resort to these germicidal agents, when the pyogenic organisms are not present, operates unfavorably upon the healthy structure. The reaction in the practice of many surgeons of large practical experience, from observing the absolutely hurtful effects of the ordinary solutions of corrosive sublimate, when brought in contact with the absorbent surfaces of normal structures, is tending to a limitation of this poisonous substance to external use. These do not belong to the class of "superfluous laggards" who are characterized as opposed to the methods of asepsis and antisepsis, by the author of a recent work on surgery. But they are of that independent order of creation who are not bound down by any prescribed formulas and are bold enough to abandon a vicious practice which has brought trouble in its train to many victims of routine treatment.

It is well known to all surgeons, who have investigated thoroughly the merits of antisepsis, that there are many germicidal applications far safer than corrosive sublimate, which meet all the requirements in surgery, and the day is not far distant when the use of the solution of corrosive sublimate will be excluded from all operations upon incised healthy structures. There is a gradual movement of the pendulum of antisepsis towards asepsis, and it is found that sterilized water is the safest and best wash for surfaces not contaminated by previous septic developments in their tissues.

Antisepsis has a legitimate field of use in surgery, and it is to be regretted that the careless extravagance of the advocates of sublimate solutions should have given this process a black-eye by poisoning patients with them, who could have been treated successfully with other antiseptic agents.

Great detriment to antiseptic treatment has ensued from the indiscriminate application of solutions of corrosive sublimate, but judicious men are now more guarded in employing them in surgery.

Upon the general principle that no surgical operation of any magnitude should be undertaken without proper knowledge of the habits of life on the part of the patient, I may advert to a fact which is overlooked by many operators, in regard to the importance of continuing the use of any stimulant or narcotic to which the patient has long been accustomed. Within my experience the interruption even of the tobacco habit has been followed by troublesome nervous depression, after operations, and the resumption of the use of this narcotic has afforded complete and prompt relief. I recall an instance of laparotomy for the removal of an immense cystic tumor of the ovary in a lady sixty years of age who, of her own accord, stopped smoking the pipe after the operation. For a few days all seemed to be doing well with the case, but at the end of a week there was a most profound depression of spirits with vital prostration, which immediately disappeared upon resuming her pipe and the final result was entirely satisfactory.

We all know that a patient who has been addicted to the use of alcoholic drinks for a considerable period before submitting to any surgical operation, cannot have it suddenly abstracted without being subjected to great disturbance of the entire nervous system. If he does not reach the point of perturbation to produce delirium tremens, there will still be such derangement of all the functions as to interfere materially with proper nutrition, which may pave the way to serious complications in the after treatment of the case. It is, hence, essential under such circumstances, to take into account the previous habit in this respect, and continue to give certain quantities of the alcoholic stimulant at fixed periods to avert any troublesome consequences. An individual may fail to give such information as to habits of life in regard to the use of alcoholic stimulants unless specially interrogated and yet would not hesitate to state the fact upon inquiry for the guidance of the surgeon in his case.

The most important matter, however, for our investigation is in regard to the

opium habit in one subjected to a grave operation. I am convinced from a case which has recently been reported to me, that operators of experience and with a full knowledge of the use of morphine by a patient, do not always realize the great detriment resulting from the sudden withdrawal of this article after an important operation. All abnormal conditions resulting from any habit should be compensated in the after treatment. Observation of the changes resulting from inflammatory processes, should be accompanied by a study of those modifications impressed upon the tissues by impairment or undue activity of the nerve element, which enters into their composition. That many operators fail to take into account the nervous system, in their surgical pathology, shows a lack of due consideration of the surroundings of a patient. While the legitimate field of surgery is the proper use of means of relief for organic or structural disorders, there are prerequisites in the recognition of the conditions warranting an operation and in the preparation of the patient for undergoing it safely, which should characterize the highest type of the surgeon.

The distinction of external and internal treatment is held by most European authorities as the basis of recognition for the practice of surgery and medicine. But this line of distinction does not imply that all disorders of the inner structures are to be left for the treatment of the practitioners of medicine. Nor should all the pathological conditions not demanding operations be excluded from the domain of surgery A proper recognition of the scope of surgery and medicine is that of organic and functional disorders of the system.

With this limitation of the province of the physician as contra-distinguished from that of the surgeon, the work of the former should be confined to such measures as are calculated to correct the performance of the functions of the different organs of the body whether internal or external.

When organic changes ensue, whether demanding the use of medication or a resort to operative measures, the case comes then within the field of surgery. It presents a modification of structures, more or less pronounced, which alters the constituents so as to produce a departure from the normal state of the part involved, in its size, shape or density. An incision or a puncture may be requisite to diagnosticate such a condition, but if this change of structure could be clear y ascertained without any explanatory operation, the case would still fall within the domain of surgery ; with this distinction between functional and organic disorders for the practice of medicine and surgery, so soon as a change in the state of the case is recognized by the physician, it should be transferred to the charge of surgeon, and he will still have the disadvantage of combating the latter stages of organic disorders. It may be that a skillful operator is not qualified for the highest attainment in surgery, from lack of proper precaution in proceeding with an operation.

The aim of the surgeon should be a due comprehension of abnormality in the structures of the part involved, and his end be to afford relief with the least possible injury to the organ or member which is the seat of disorder. Conservative surgery may be destructive of certain parts for the purpose of saving the structures, and the properly qualified surgeon should consider maturely every phase of the case under examination, so as to assume the responsibility of lopping off the disease and prevent its extension to the sound tissues. He who fails to use the knife or the cautery, when a resort to either would stay the progress of disease, is not the exponent of conservative surgery, but on the contrary, aids and abets the work of destruction in the parts implicated, while he contributes ultimately to the death of the patient.

Ignorance and inexperience often lead to sad results in meddlesome surgery, when limbs are sacrificed or organs mutilated, to gratify the desire to figure as a bold operator on the part of a would-be surgeon.

In such cases no high-toned member of the profession should shield the culprit from the charge of malpractice or from the assessment of damages by a court of justice. While the allegation of malpractice, without sufficient cause, should never be encouraged by the better class of practitioners, it would be well to bring home to those who rush into the

surgical arena, unknowing and unknown, the consequences of their rashness. Of the two evils over-caution against doing harm is far preferable to meddlesome surgery, and yet we would not hold him guiltless who stands with folded arms and suffers a patient to die who might be saved by a timely operation.

There is a field in surgery for masterly inactivity, and non-interference is to be highly commended when by an operation a fatal result is precipitated. The want of a proper investigation of a case presenting grave complication may lead a physician to delay in calling a surgeon until the opportunity for relief has passed and his interference can avail nothing, so that he is justified in standing aloof.

There are numerous instances of the failure in surgical procedure from the late period of performing an operation, and it is greatly to be desired that a surgeon should be called in proper time by physicians having cases under their care which are likely to require surgical interference. If a consultation should be called and the surgeon found no indications for an operation, then of course the physician would be relieved of any future responsibility in proceeding with the treatment. But most probably their joint attendance would lead to the more satisfactory result in enabling them to determine upon the conditions developed in the progress of the case which might warrant an operation.

The dilatory spirit manifested by patients and those around them, as to resisting surgical means of relief in acute cases, has proved a barrier to the adoption of the expressed views of surgeons in favor of prompt action in many cases of great urgency. All practitioners of considerable experience have had occasion to regret that the opportunity for forestalling a grave malady has been lost by the indisposition to submit to a timely operation, and they led a further hope to end in disaster.

In this connection, however, it may be appropriate to consider the claims of a different case to our attention; when death is inevitable without an operation, and the knife affords the only chance, however slim that may be, for escape, it is a fair mode of dealing with this class of cases, for the surgeon to put himself in the place of the patient and determine what he would desire for himself under similar circumstances. Most of us, I think, in the possession of our faculties, would avail ourselves of the operation, and hope for the best result of it. Viewing matters from this standpoint, if those interested in the patient, manifest a desire to take the risk of which all are apprised, I think we are warranted in operating even should the probabilities be greatly against a successful result.

It is very true that untoward results, even when expected, tend to discredit surgery and to give an excuse to others for declining an operation at a certain stage when it might serve a good purpose. But considering the surroundings of the individual alone, we have certain death without an operation staring us in the face; and if the patient, after being advised of the situation, desires an operation, it should be performed.

But we have a serious question for settlement among ourselves as surgeons, and I am more especially concerned in the proper adjustment on this occasion of the differences in the surgical views of those who are equally entitled to think and to act in regard to surgical cases of great gravity.

In the course of consultation with other surgeons I have sometimes submitted a definite view in favor of immediate operation, proceeding with a confident expectation of warding off a fatal result, when the response of my colleagues has been such as to discourage any interference. On some of these occasions the unfavorable verdict has been accompanied with the statement, that if I thought proper to take the responsibility of operation, that they would render any assistance which might be desired, without, however, expecting any benefit. Of course I declined to rush into the breach under such untoward circumstances; and yet it has occurred to me that there ought to be some expression from the profession as to the line of duty for one who feels prompted to undertake the rescue of a patient from a most perilous situation, in which there is absolutely no hope without a surgical operation.

At the risk of being considered heterodoxical I would draw the attention of the profession to a consideration of the

propriety of immediate operation in that desperate class of cases which result from the crushing and mangling of limbs, attended with profound shock. It has been the custom of most surgeons to watch and wait while means are resorted to for restitution of the vital forces by stimulants. With our deficient knowledge of the exact etiological factor in this anomalous condition, I am inclined to the view that a continuous baleful influence is propagated to the nerve centers from the disintegration of the structures involved, and that this may be modified favorably by a clean incision through sound tissues above the point of injury very soon after such violence to the parts. It strikes me forcibly that surgical relief within fifteen or twenty minutes after an accident, involving the muscles, bones, nerves and blood vessels, cannot intensify the shock, and that many of the cases left to die without any operation might be rescued by a prompt amputation of the member. The A. C. E. mixture offers the most favorable conditions for an anesthetic and tends to lessen rather than increase the prostration, while the operation should be done with all possible dispatch.

It may prove the most conservative surgery to lop off structures whose vitality is completely destroyed and under the proposed state of the parts there can be no prospect of any restoration of nerve power or circulation to the tissues by delay in undertaking an operation. A proper appreciation of the participation in shock by the ganglionic nervous system should impress the surgeon with the great importance of arresting the morbific influence at the very earliest period practicable by removing the cause while energetic correctives are employed.

At this point it may be appropriate to advert to the precautions requisite in all grave operative procedures to avert a depressing effect; independent of previous violence

I have been convinced, by observation, that the use of moderate doses of quinine and strychnine during twenty-four hours, preceding any important surgical operation, seems to ward off the nervous prostration. It has also been my custom to administer an alcoholic stimulant with a hypodermic of morphine and atropia within a half hour preceding such an operation, and these preliminary measures have been attended with most satisfactory results. Prevention of shock is preferable to combating it by energetic means after a surgical operation.

As a fitting conclusion of this whole matter I would suggest that no surgical measure should be resorted to without looking into and correcting all underlying departures of the physical organization from the standard of health. It may not be possible to restore the normal condition of the secretions and excretions, yet means should be used for their correction, so far as may be practicable as a preliminary step for even the most simple operation; as the surgeon never can know in advance what complication may be developed in the course of treatment.

To prepare a patient for undergoing any capital operation, when the forces of the vital organism have been exhausted by long suffering, it is requisite to support the system by tonics and nutritious food for days or weeks prior to the surgical procedure. A neglect of this precaution is inexcusable, except in cases of urgency, when the delay would be likely to aggravate the malady.

The after treatment in surgical cases is in like manner of great importance to secure a good result, and this should include not only medication and food, but proper seclusion from exciting associations and due regard to the hygienic surroundings.

Some Notes on the Corneal Astigmatism in Two Hundred Eyes Measured with the Ophthalmometer of Javal, in Comparison with the Total Subjective Astigmatism after Complete Mydriasis.

By G. E. de Schweinitz, M. D.

[Read October 26, 1892.]

THE ophthalmometer of Javal and Schiotz requires no introduction. Its advantages as an instrument of practical use are everywhere recognized, and even those who look upon its readings with misgivings are not inclined, I think, to disregard it entirely or set it aside in the lumber-room. True, it has sometimes suffered from unduly enthusiastic advocacy, but plenty of conservative es-

timates of its undoubted value are extant, and may be consulted for trustworthy information.

It will be interesting for a moment to give a brief *resume* of the rise of ophthalmometry with this instrument in the United States. To Dr. Swan M. Burnett, of Washington, belongs the credit of having been the first one in this country to advocate its use and demonstrate its practical value, in a paper entitled "Ophthalmometry with the Ophthalmometer of Javal and Schiotz, with an Account of a Case of Keratoconus," which appeared in 1885.[1] Two years later his treatise on astigmatism was published, containing a description of the instrument and of its value as a means of measuring the corneal astigmatism. One year later he recorded an exhaustive analysis of the refraction of more than five hundred healthy human corneæ examined with the ophthalmometer of Javal and Schiotz,[2] and in the discussion which followed this paper, Dr. Henry D. Noyes praised the ophthalmometer of Javal, stating that it was his habit to employ it in every case where it was necessary to inquire into the refraction of the eye. In his work on diseases of the eye there is an excellent description of the instrument and of the method of using it.

In the years which have followed, we find papers on the subject of ophthalmometry with this instrument by H. D. Speakman,[3] by Koller,[4] and an earnest advocacy of its employment,an advocacy which has never ceased, and has never been couched in words of an uncertain tone, by Roosa.[5] In November,1891,Dr. F. W. Ring[6] published a good description of the ophthalmometer and its uses, based upon personal conversations with Tscherning, Bull, of Paris, and Javal, and upon notes selected and compiled from the *Memoires d' Ophthalmometrie*. At the forty-second annual meeting of the American Medical Association held in Washington, May 1891, Dr. Burnett placed upon record further contributions to keratometry, reviewing his previous work and reiterating his favorable opinion of the ophthalmometer. In the present year articles upon the subject have been written by E. Swasey,[7] Roosa, Würdemann,[8] VanFleet,[9] and others; while Valk, in the new edition of his *Errors of Rafraction*, gives a good description of the ophthalmometer, and records a table of comparative examinations.

Some unfavorable comments have been published, together with a series of tables not unlike the one which I hope to present this evening, by Dr. J. H. Woodward,[10] but even in this paper, although objections are made to certain inaccuracies, according to the belief of this author, he frankly admits that the ophthalmometer is a useful adjunct and helps to point the way to the diagnosis of astigmatism, being especially useful when this refractive defect is of high degree.

The most recent communications upon the subject in this country are the papers of A. E. Davis,[11] containing, as it seems to me, the best practical directions for using the instrument accurately. I have not attempted to give references to the many foreign papers upon this subject; anyone interested will find quite a complete bibliography in Javal's *Memoires*.

Thus we see that from the publication of Dr. Burnett's paper, in 1885, up to the present time, numerous communications have appeared in this country, many of them strongly advocating the employment of this instrument.[12] Practically there has been no dissent from the views which Burnett advocated nearly

[1] Archives of Ophthalmology, vol. xiv.

[2] Transactions of the American Ophthalmological Society, 1888.

[3] Archives of Ophthalmology, 1890, vol. xix, and New York Medical Record, 1890, vol. xxxvii.

[4] Journal of the American Medical Association, 1890, xv. 380 to 383.

[5] Medical Record, April 19, 1890; New York Medical Journal, March 28, 1891; Medical Record, March 26, 1892.

[6] Ophthalmic Record, November, 1891.

[7] Boston Medical and Surgical Journal, March 10, 1892. cxxvi, pp. 232 to 236.

[8] Journal of the American Medical Association, September 3, 1892.

[9] New York Medical Journal, July 9, 1892.

[10] New York Medical Journal, July 16, 1892.

[11] New York Medical Journal, Sept. 10, 1892.

[12] It should be stated that Dr. Welland has made a study of what he believes to be the main defects of the ophthalmometer of Javal from a mathematical standpoint, and has published his research in the Medical News. 1892, lx. 626 to 629.

eight years ago, and it seems eminently proper that Javal should characterize him, which I am sure we are all glad to do, as the champion of ophthalmometry in America.

The cases which I present for your consideration this evening are taken from my private practice exactly in the order in which they presented themselves for examination. Each case, after the usual tests for visual acuity, the amplitude of accommodation, and the balance of the external ocular muscles, was examined with the ophthalmometer of Javal, and the reading carefully recorded. The eyes were then subjected to complete mydriasis, with atropine, hyoscyamine, or cumulative instillations of homatropine. In the cases under thirty years of age, hyoscyamine or atropine was employed; in those over this age, cumulative instillations of homatropine. In each instance a complete paralysis of the ciliary muscle was obtained, because I am one of those who believe that this can be done with a strong solution of homatropine when properly employed, and, as is well known, I have full support in this belief from such careful observers as Risley, Randall, and Jackson.

From these observations the tables were arranged, as will be seen, by placing first the case number, then the sex of the patient, followed by the age, the ophthalmometer reading, the glass selected under a mydriatic, the difference in the axes, and finally the difference in the amount of astigmatism, provided there was any difference in these respects. In recording the ophthalmometer reading, it might have been written, as Davis has suggested, for example: "Astigmatism with the rule 1 D axis 90°+, or axis 180°—." Again, "Astigmatism against the rule 180°+ or 90°—." In order to save space, however, the repetition has been omitted and the ophthalmometer reading is recorded, for example, thus: O.S. 3 D axis 180; glass selected after a mydriatic—2.75*c* axis 180, and not, as might have been done, following the directions above, O.S. 3 D axis 90+, or axis 180—, glass selected after mydriatic —2.75*c* axis 180.

Many of the degrees of astigmatism are weak, representing 0.25 D, 0.37 D, and 0.50 D, or, in other words, indicating that a reading was made in fractions of a dioptry, according to the amount of overlapping of the steps of the reflector. Now it is a difficult matter to assure one's self that the corneal images of the reflector are exactly in apposition, and there is no doubt that it is easy to commit an error of 0.25 or 0.37 D, when the first adjustment of the ophthalmometer is made. To a certain extent this depends upon the skill of the observer, but nevertheless introduces an element of doubt. Woodward, whose article has been referred to, writing concerning this point, says: "In the appended reports I wish to be understood. I do not pretend to accurately bisect the image of one-half of one step of the reflector; when the reading is, for example, 0.25 or 0.75 D, I wish to convey the idea that the overlapping of the reflector was, as nearly as I could estimate it, one-quarter or three-quarters of the step." This is, of course, a very fair statement, and applies in the present instance. I presume no one would pretend to be certain of estimating exactly one-quarter of the step. Still practice develops reasonable accuracy, just as it does in a cataract section where we are accustomed to estimate the width of a millimeter, or even of a fraction of a millimeter.

Analysis of the Tables.—There were 150 eyes in which the ophthalmometer recorded astigmatism according to the rule. In 134 of these eyes the axis of the cylinder found with the aid of mydriasis corresponded with that determined with the instrument. In 16 eyes there was a difference in this respect, the least difference being 5°, the greatest 75°. In the latter case the ophthalmometer recorded distinctly a slight astigmatism (0.25 D) according to the rule, but the patient accepted positively the same degree of astigmatism, but with the axis of the glass contrary to the rule.

In 35 eyes the amount of astigmatism found with the instrument exactly corresponded with that revealed by mydriasis, but in 115 eyes there was a difference in this respect: In 6 of them the mydriatic correction was slightly greater in amount than that found with the ophthalmometer—four times 0.12 D, and twice 0.25 D; in the remaining 109 eyes the

ophthalmometer reading gave a greater degree of astigmatism than the mydriatic measurement—twenty-five times 0.12 D, sixty-five times 0.25 D, four times 0.37 D, fourteen times 0.50 D, and once 0.75 D, or in other words, the average error was less than half a dioptry, being exactly 0.2613 D.

There were 21 eyes in which the ophthalmometer recorded astigmatism contrary to the rule. In 18 of these eyes the axis of the cylinder found with the aid of mydriasis corresponded with that determined by the instrument. In 3 eyes there was a difference in this respect, the least difference being 5° and the greatest 15°. The amount of astigmatism was identical in 9 eyes, but was different in 12 eyes. In 3 it was more than the ophthalmometer recorded with mydriasis, and in 4 less than the ophthalmometer recorded with the mydriasis. The average increase in the degree of astigmatism found with mydriasis over that recorded with the ophthalmometer was less than half a dioptry, or exactly 0.295 D.

There were 22 eyes in which the ophthalmometer recorded no astigmatism. In 10 of these eyes mydriasis also failed to reveal astigmatism, but in 12 an astigmatism was developed after the use of the drug, once with the rule, and eleven times contrary to the rule. The case with the rule was only 0.12 D, and for practical purposes may be omitted. In the remaining 11 cases the amount of astigmatism varied from 0.25 D to 0.62 D, with an average of about 0.384 D. To recapitulate these results we have :

A. There were 150 eyes with astigmatism according to the rule, with—

	Eyes.
1. Correspondence in axes in	134
2. Difference in axes in	16
	150
1. Exact correspondence in amount of astigmatism	35
2. Difference in amount of astigmatism	115
	150
1. Astigmatism greater with mydriatic than with ophthalmometer in	6
2. Astigmatism greater with ophthalmometer than with mydriatic.	109
	115

If to the last total the 35 eyes in which there was exact correspondence in the amount of astigmatism be added, we have again a grand total of 150 eyes.

B. There were 21 eyes with astigmatism contrary to the rule, with—

	Eyes.
1. Correspondence in axes in	18
2. Difference in axes in	3
	21
1. Exact correspondence in amount of astigmatism	9
2. Difference in amount of astigmatism	12
	21
1. Astigmatism greater with mydriatic than with ophthalmometer in	8
2. Astigmatism greater with opthalmometer than with mydriatic in	4
	12

If to the last total be added the 9 eyes in which there was exact correspondence in the amount of astigmatism, we have again a grand total of 21 eyes.

C. There were 22 eyes in which the ophthalmometer recorded no astigmatism, with—

	Eyes.
1. No astigmatism found with mydriasis in	10
2. Astigmatism found with mydriasis in	12
	22
1. Astigmatism according to the rule in (only 0.12 D)	1
2. Astigmatism contrary to the rule in (0.25 to 0.62 D, average 0.384 D)	11
	12

D. There were 5 eyes in which the ophthalmometer recorded astigmatism, but with—

	Eyes.
1. No Astigmatism with mydriasis in	5

In each of these eyes the astigmatism was according to the rule and the amount 0.5 D. Two eyes were practically blind, one from detachment of the retina and the other from congenital amblyopia, and hence these are of no importance in the result:

	Eyes.
1. Astigmatism according to the rule	150
2. Astigmatism contrary to the rule	21
3. Astigmatism absent according to ophthalmometer	22
4. Astigmatism present according to ophthalmometer but absent with mydriasis	5
5. Practically blind	2
	200

REMARKS.

1. THE AXIS OF THE CYLINDER.—In the 171 eyes in which it was possible to institute a comparison in the axes of the cylindrical glasses obtained by the two methods of measurement, there was exact correspondence in 152 eyes, or in 88.9 per cent., and failure in correspondence in 19, or 11.1 per cent.

Touching the 11 per cent. of failures it should be stated that so much depends upon perfect illumination, steadiness of the patient's eyes, and above all, upon an exact level of the two eyes, that it is more than probable that this percentage represents some inaccuracy of the observer rather than of the instrument. Davis,[1] in a recent article on this topic, quotes a capital instance illustrating the care which must be exercised in this respect. He examined a patient in Javal's clinic, failing, however, to take the precaution to see that the patient's eyes were exactly level, and found that she had an astigmatism at an axes 5° from the vertical. Javal then sat down to the instrument, sighted through the transverse slit, leveled the patient's eyes and measured the astigmatism, finding the same amount that Davis had discovered but with the axis vertical. The trial lenses confirmed his reading.

Moreover, it is a fact which has been pointed out a number of times by most careful observers, that the axis of the glass determined under the mydriatic sometimes fails to correspond with that accepted by the patient after the return of accommodation. Personally, I have had little or no difficulty in this respect, but would be inclined always to adopt the mydriatic determination of the axis, unless successive measurements with the ophthalmometer agreed in giving a different result from this, and then, after renewed mydriasis, I would expect to find a correspondent in the two methods; in other words, I would think my first mydriatic correction had been in error.

Finally, it should be remembered, that the question of error creeps into all methods of examination, and it seems to me not unlikely that any one of us, having determined the axis of a cylindrical glass in 171 eyes under a mydriatic, would, if he repeated these examinations with renewed mydriasis, find at least a dozen eyes in which he would be inclined to alter the axis of the glass 5° or 10° from the first determination, especially in the weaker grades of astigmatism. I am not unmindful of the occurrence of cases (one of which is recorded in the list, while several others could be quoted) in which there was a notable difference in the axes determined by the two methods; for example, the ophthalmometer giving distinctly astigmatism against the rule, and the patient accepting only, both with and without mydriasis, a cylinder with its axis according to the rule. These cases are probably explained by the presence of lenticular astigmatism, which the instrument is not capable of recognizing.

2. THE AMOUNT OF CORNEAL ASTIGMATISM.—In 171 eyes in which a comparison is made between the amount of corneal astigmatism determined by the instrument and the total astigmatism under a mydriatic, there was exact correspondence in 44 eyes, or 25.7 per cent., and failure in correspondence in 127 eyes, or 74.3 per cent.

In 109 eyes with astigmatism according to the rule, in which the astigmatism found with the instrument was greater than the amount found with mydriasis, the average increase was a little more than 0.25 D, being exactly 0.2613 D. In 12 eyes with astigmatism contrary to the rule, in which the astigmatism found with the instrument was less than the amount found with mydriasis, the average decrease was again a little more than 0.25 D, being exactly 0.295 D. This we know from Javal's teaching, is the usual result, and that in weak astigmatism according to the rule, the ophthalmometer is from 0.25 to 0.50 dioptries stronger than the subjective measurements with atropine. In astigmatism against the rule the ophthalmometer is too weak by from 0.25 to 0.75 D.[2]

Touching this same point, Burnett has formulated the following law, to which he thinks they are only occasional exceptions: "For the total subjective astigma-

[1] Loc. cit.

[2] See also description of the ophthalmometer by F. W. Ring, M. D., in the Ophthalmic Record, November, 1891.

tism subtract 0.5 D from the corneal astigmatism when it is according to the rule, and add 0.5 D if the corneal astigmatism is against the rule. Bull, of Paris, quoted by Burnett, holds to a similar law, using, however, 0.75 D instead of 0.5 D. This, Dr. Burnett considers too high, and I certainly agree with him, my own experience being that 0.5 D is quite sufficient to subtract from the corneal astigmatism when it is according to the rule. In fact, as I have already pointed out, in the majority of cases it seems to be somewhat less than this amount.

That there are exceptions to these rules Dr. Burnett admits, and I think everyone who works with the ophthalmometer will find them. In the figures presented this evening we see that in six eyes with astigmatism according to the rule, the total subjective astigmatism was greater than the corneal astigmatism and in four eyes with astigmatism contrary to the rule, the amount of astigmatism given by the ophthalmometer was greater than that found with a mydriatic. It should be stated in regard to these cases, however, that the difference was usually 0.12 D, and only twice 0.25 D. Dealing with such weak degrees of astigmatism, it is just as likely that the eye of the observer was at fault, as that the instrument made an inaccurate record.

Again, we have exceptions to the rule in the fact that there was an exact correspondence in the amount of astigmatism in 35 eyes with astigmatism according to the rule, and in 9 eyes with the astigmatism contrary to the rule. Here again, with 6 exceptions, the astigmatism was of low degree (0.25 or 0.50 D). In the 6 exceptions, however, it was more than 1 D. and ran as high as 3.50 D.

In 22 eyes the ophthalmometer failed to record astigmatism and in 10 of them no astigmatism was found with mydriasis, but in 12 of them a low degree of this refractive defect was demonstrated after the use of a mydriatic (0.12 to 0.62 D). In all of the cases in which this occurred, save one which for practical purposes, as has already been pointed out, may be omitted, the astigmatism was contrary to the rule; and this again agrees with the teaching that has previously been given, namely, when no astigmatism is found with the ophthalmometer, it is very probable that there is a real astigmatism against the rule from 0.25 to 0.50 D.

This analysis of the results obtained by the measurement of 200 eyes will, I think, suffice. The results have been given without bias, and inasmuch as they practically confirm those of other observers who have found the ophthalmometer exceedingly useful in the determination of corneal astigmatism they may be accepted as an additional indorsement of the many that are already on record as to the decided value of this instrument of precision.

Even if the ophthalmometer of Javal did nothing more than give us the axis of the principal meridian with a reasonable degree of certainty, which it undoubtedly does, it would be a very time-saving and valuable instrument in the office of the practical ophthalmologist. It has been stated that when the astigmatism exceeds 2 D, we may be certain that we are within 5 degrees of the true meridian or axis, and when the astigmatism is slight, there may be a possible error of 10 degrees; but it is equally true that with the model of 1889 the precision is greater, and, judging from my own experience, I would have a confidence in the axis of the glass attained by this method of examination equal to that which I have with subjective examination under the fullest mydriasis, and when I associate the two methods of examination, I am as certain of this point as it is possible to be.

But it is certainly fair to assume that, within reasonable limits and in the vast majority of cases, the ophthalmometer gives very exactly the degree of astigmatism, and that the combined observations of a number of observers permit the formulation of a rule, like other rules, is subject to exceptions, which tells us very nearly how much shall be subtracted from the ophthalmometer measurement when it is a case of astigmatism according to the rule, and how much shall be added to it when it is a case of astigmatism contrary to the rule. No one claims perfection for the instrument any more than he claims perfection for any other method of examining the eye, but when the opthalmometer is carefully used, when the light is properly regulated and evenly distributed, when the eyes are carefully levelled, and when the observer, having corrected his

own refractive defect, has acquired reasonable accuracy in the manipulation of the instrument, I certainly believe, and think these tables fairly show it, that Dr. Burnett is correct in stating that this is one of the most important instruments of positive diagnosis which has been given to us since the invention of the ophthalmoscope.

I am aware that much stress has been laid upon the fact that it is not an absolutely accurate measurer of astigmatism, and that disturbing factors come in to play, *e. g.*, the watering of the eye of the patient, and, as Dr. Roosa aptly calls it, "the moving of the corea under the instrument." It is for this reason that the examinations must be constantly repeated before making the final record or before ordering the glass, just as we would repeat a mydriatic correction until we were satisfied that we had attained the highest degree of accuracy. It would be just as reasonable to condemn the instrument on this account as it would be to condemn cataract extraction because one does not always have a docile patient and does not always make a classical section.

It is not the purpose of the present paper to discuss a question which is full of interest, namely, how far the use of the ophthalmometer displaces mydriatics from their function in the correction of anomalies of refraction. It is needless for me in this assembly, I think, to state that I am very far from believing that the sun of mydriasis has set, or, indeed, that it ever will set. I have elsewhere expressed myself very positively upon this subject, because I believe that the functions of mydriasis in connection with the correction of anomalies of refraction does not alone involve paralysis of the ciliary muscle, but exercises a very much wider and more important office. I am perfectly willing to state, however, that careful work with the opthalmometer will render the necessity of the use of prolonged mydriasis unnecessary in many cases, which, previous to a knowledge of this instrument or to any skill that may have been acquired in its use, would have been classed as examples suited to the employment of a mydriatic drug.

I cannot resist closing these remarks with a quotation from Dr. Burnett's first paper on "Ophthalmometry with the Ophthalmometer of Javal and Schiotz," partly because I feel a personal indebtedness to him in learning the use of this instrument, and partly because it gives in a nutshell what the instrument will and will not do, and hence what we may expect of it:

"The ophthalmometer does not give us the refractive condition of the eye as a whole, and furnishes no positive indication as to the existence of myopia or hypermetropia, but it gives with exactness the radius of curvature of the cornea in all its meridians; and where there is a difference, it shows the direction of the principal meridians, and we can read on the instrument the amount of the difference in dioptries and fractions. The inventors claim that a difference of 0.25 D can be readily detected, and my own experience would substantiate this statement. The main question is, Is it practical? I most unhesitatingly answer, Yes. Taking all things into consideration, it seems to me the most practical of all of the instruments of precision we use in the diagnosis of astigmatism."

A CLINICAL DESCRIPTION OF DYSENTERY AS IT OCCURS IN NICARAGUA.

By JUDSON DALAND, M. D.

[Read October 26, 1892.]

THREE varieties of dysentery are met with in Nicaragua, namely, the malarial, the endemic, and the epidemic, and of these the malarial is by far the most common. The prodromal symptoms of malarial dysentery are malaise, pain in the back, in the head, and in the umbilical region extending toward the pubes. In association with the diarrhœa these pains are highly characteristic of this form of dysentery. Mild cases are marked by very slight febrile and circulatory disturbances; whereas in the more severe cases, we have a moderate elevation in temperature, varying between 102° and 104° F. The stools are at first composed almost entirely of pure mucus, are small in quantity and are frequently attended by tenesmus; soon the mucus is streaked with blood. The pains are not usually severe during the act of defecation, but the pain in the head

and back is excruciating. Liver complications are not infrequent, particularly acute hepatitis or acute hepatic engorgement, each of which is frequently associated with jaundice. Hepatic abscess is a rare complication and is usually secondary to the ulceration of the colon. At times the spleen becomes greatly engorged.

Changes in the urine, indicative of kidney disease, probably exist, but chemical and microscopical examinations are rarely made from lack of proper instruments and reagents. Many of these cases of malarial dysentery are followed by intense anæmia and debility, lasting for several months.

When cases are seen early and promptly treated, the prognosis is almost uniformly favorable, but when seen late they usually die. As post-mortem examinations are never permitted, no information exists regarding the morbid anatomy or pathology of this interesting disease. The amœba coli, if searched for, would be found in many of these cases.

The treatment found most successful by Dr. Bermudez, of Managua, Nicaragua, is as follows: To an adult is given six grains of quinine morning and evening, in conjunction with—

R.—Ammonii chloridi . . . . . gr. v.
Pulv. ipecac . . . . . gr. v.
Tr. opii . . . . . gtt. x-xv.
To be repeated every two hours.

The amount of laudanum is determined by the severity of the pain. When the pain is particularly severe and obstinate, morphine is superadded, and, in cases marked by debility, it is customary to substitute the carbonate for the chloride of ammonium in five-grain doses, every two hours, day and night.

In the way of food nothing is permitted except milk or milk and lime-water, to which sago may be added. The patient is allowed to drink freely of cool water, thus alleviating the intense thirst which is usually present. Ice water is considered harmful.

The *second* variety, known as endemic dysentery, resembles the preceding, but is very much milder, and is usually unattended by the fever or the severe pains in the head, back, extremities or abdomen that characterize the malarial form. The stools are composed of feces mixed with mucus and blood; are less frequent, and the tormina and tenesmus are less severe.

The average duration of malarial dysentery is three weeks, but occasionally it has been known to last two months, while very mild cases run their course in two weeks.

The treatment for this variety is the same as for the malarial, with the exception that the quinine is omitted. Almost all cases recover, and complications or sequelæ are uncommon.

The *third* variety recognized is called epidemic dysentery, which, as a rule, comes on suddenly, with pains in the head, back, throat, and extremities, accompanied with severe abdominal pains, shooting in character and centering at or about the umbilicus. Headache is particularly complained of; and not infrequently nausea and the vomiting of bile are associated. From the first the discharges are bloody, frequent, and there is intense pain and tenesmus. There may be as many as one hundred and fifty evacuations in the twenty-four hours, and an ordinary case may average twenty-four in the twenty-four hours, or one hourly, day and night. The temperature is high, ranging from 104° to 106° F., with a morning remission of two degrees, at which time there may be moderate perspiration. Severe cases die in less than seven days, and favorable cases may recover in from two to three weeks.

The discharges from the intestines continue bloody throughout the disease, but change in color, becoming dark and sometimes black from decomposed blood-pigment, and frequently they are vicid and tenacious from admixture with mucus.

At times the patient becomes delirious, and occasionally coma supervenes. Children often develop twitching of the muscles, rolling of the eyes, and there is a tendency to bury the head in the pillow.

The complications usually noted are hepatitis, jaundice, and abscess of the liver. Usually so soon as hepatic complications occur the patient dies; in other cases epidemic dysentery is complicated by croupous pneumonia with rusty sputum, and it usually affects the base of the right lung. Now and then severe internal hemorrhages occur, and such an

accident explains the cause of sudden death which has been occasionally observed. In this form of dysentery the anæmia and debility are more marked than in the malarial form, and is more presistent. Not infrequently the patient suffers from obstinate constipation, due to stricture resulting from the healing of large and deep ulcers in the colon.

These cases are best treated by the administration of from ten to twenty grains of quinine given three times daily, and in addition chloride of ammonium, five grains; pulverized ipecac, five grains; and tincture of opium, ten to fifteen drops, repeated every two hours. Frequently, however, there is so much gastric irritability that these remedies are not retained, and in such cases the quinine is continued, but the chloride of ammonium and ipecac mixture is omitted, and fifteen grains of bismuth or five grains of tannic acid repeated every two hours, is substituted. When opium is indicated it is invariably administered in the form of the tincture, in doses of five to fifteen drops, repeated every two or three hours according to the severity of the case. At times nitrate of silver, in doses of one-sixth or one-eighth of a grain in pill form, is given every three hours. If the astringents mentioned prove of no avail, recourse is had to the acetate of lead, in doses of two or three grains every three hours. Most cases require stimulants, and experience has shown that alcohol in the form of brandy or whiskey is *inadvisable*, and that the best results are secured from the use of sherry, port, or any of the red or white wines, associated with the carbonate of ammonium, in ten-grain doses repeated every three hours.

The food is restricted to milk and lime-water, sago, farina. Not infrequently Dr. Bermudez has seen as many as one hundred cases in two months with the mortality of but 2 per cent., and his father would probably see as many as two hundred cases in the same length of time.

Dysentery is one of the most common diseases of Nicaragua, and typical examples of the disease may be seen any day in the year. Most cases of malarial dysentery are observed during December, January and February, while the epidemic variety occurs more frequently during the months of March, April and May. Of course, endemic dysentery is always present, and, as would be naturally expected, is equally prevalent at all seasons. The malarial form prevails chiefly in low, marshy districts, during the hot months. It is well to remember that the dry season, which corresponds to our Summer, begins in November and ends in April, the remaining months constituting the Nicaraguan Winter, or wet season. The average maximum temperature in the dry season is from 95 to 98 degrees. There is a difference of at least ten degrees between the temperature of the day and that of the evening.

The contagiousness of epidemic dysentery is fully recognized, and all ordinary precautions are taken to prevent the spread of the disease: Isolation, the free use of carbolic acid, the burial of all discharges, especially fecal and urinary; the burning of the linen soiled by the discharges; and in cases where the patient is too poor to submit to the destruction of clothing by burning, they are disinfected by boiling water.

In all these cases no researches have been made regarding the presence of the amœba coli.

Nicaragua has excited much interest of late, particularly in view of the probability that in the near future the Nicaraguan canal will become a reality, which will bring it into intimate relations with the entire world. I have, therefore, ventured to record these observations regarding a disease which prevails constantly, and at times becomes contagious.

My thanks are due to my friend and student, Dr. Salvador Bermudez, and to his father, who has practiced in Nicaragua for more than thirty-five years, for the description of dysentery as it appears in Nicaragua, and for the treatment which has given them the best results. The enormous experience of the physicians of Nicaragua has heretofore never been made known to the medical profession, in so much as they have no medical magazine to which they could report their observations; and, moreover, at no time has it been their custom to carefully note the cases under their care; so that this report is of particular value, and is,

perhaps, the first of the kind published in the English language. It is especially worthy of note, that the greatest confidence is placed in the use of the chloride of ammonium, and that this is their uniform practice. I would, therefore, suggest that it be employed in the United States, especially in the Southern States, where the climate more nearly resembles that of Nicaragua.

LECTURES ON THE TREATMENT OF HEPATIC AFFECTIONS.

By Dr. DUJARDIN BEAUMETZ,

Physician to Cochin Hospital. Member of the Academy of Medicine, Paris, France.

THE LIVER AS AN ORGAN OF SANGUIFICATION. (PHYSICAL CONSIDERATIONS.)

GENTLEMEN:—I am going to devote this conference to the study of the liver as an organ of sanguification. There is no more interesting study connected with hepatic physiology, and you will see how numerous are the practical applications deducible from the physiological considerations which I am about to set forth.

It is especially as an organ concerned with blood making that the ancients understood and spoke of the liver. Impressed by the special circulation of which the liver is the seat, and the large size of the blood vessels which enter and leave it, they regarded the liver as an abdominal heart, and Galen maintained that it was an organ in which were elaborated the most exquisite portions of the blood; he even added that it produced so large a quantity of blood that the alteration of its functions entailed the gravest maladies.

You will find, moreover, an allusion to this belief in the Talmud. In one of the twenty-one treatises of the Babylonish Talmud (the Bekhoroth) there occurs, in folio 55, this sentence of Rab Khahana, "The liver is a source of blood."

Not only did the ancients know the importance of the circulation in the liver, but they also knew the intimate relation between this circulation and hæmorrhoids, and they assigned to the latter an important role. They maintained that the sudden disappearance of hæmorrhoids produced grave disturbances and you will find many allusions to this belief in the writings of Hippocrates. Then came the period of decadence, when the liver was considered as a useless organ. But in the seventeenth century Stahl combated this opinion, and again attributed to the troubles of the portal circulation a considerable importance. It is in his celebrated thesis, *De vena portæ, porta malorum*, etc., etc., defended by his pupil, J. B. Gœthe, in 1698, that Stahl has set forth his views on this subject, and we see in our day one of our confreres defending this doctrine in affirming the pathogenetic role which chronic congestion of the liver plays in the genesis of diseases; I refer to the recent work of Poncel, of Marseilles.*

I desire to devote this lecture to the study of the physiology of the liver considered as a blood organ, and under two principal heads, I shall take up, first, the circulation of the blood in the hepatic gland, and then the modification which the blood undergoes in traversing this gland. You will see as we go on the importance of this study, based, as it must be, on the most recent discoveries of physiology, if we would have a clear understanding of the part which congestion of the liver plays in infectious and other diseases. Has this role been too much exaggerated? Has it, on the contrary, been too much overlooked? This is what we are now to ascertain.

To have a proper comprehension of the anatomical disposition of the hepatic circulation we shall have to review what has been taught on the subject and take up anew the study of the hepatic lobule.

You are aware that the conception of the hepatic lobule as it was understood by Hering and Kiernan has been profoundly modified these late years by the labors of Sabourin.

Hering took for the basis of his hepatic lobule, the blood vessels which it receives. Of polyhedral form, this lobule presents at its base the afferent veins which terminate in the hepatic veins, while the central vein of this polyhedron belongs to the portal vein; and within the vascular network established between the

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*Poncel, *De l 'influence de la congestion chronique du foie dans la genise des maladies*, Paris, 1891.

veins of the periphery and the central veins, are placed the hepatic cells.

Sabourin, basing himself chiefly on anatomo-pathological investigations has abandoned the notion of hepatic lobules to adopt that of biliary lobules, and he has taken for basis of this system, the bile ducts, instead of the afferent or efferent veins.

The figure which I here present indicates very clearly the scheme of this theoretical conception of this new biliary lobule. At the base of this lobule (see figure 1) we find a bile duct (B), a terminal branch of the *vena portæ* (P), one of the terminal branches of the hepatic artery (A), while at the periphery of this biliary acinus are seen the branches of origin of the hepatic veins.

Starting from the periphery of the biliary acinus, the efferent kind find their terminus in the inferior vena cava; they traverse directly the liver, and are distinguished from the vena portæ by the fact that being adherent to the parenchyma of the liver, they remain gaping on section, while, on the contrary, the branches of the portal vein, protected by Glisson's capsule which envelops them, collapse after section. And, lastly, that the hepatic veins, like the portal veins, are deprived of valves. I do not need here to describe the origin of the vena portæ. You all know that three large veins contribute to form it; the superior and inferior mesenteric and the splenic, and it is the reunion of these three veins near the head of the pancreas which constitutes the trunk of the portal vein which enters the liver by the transverse fissure. All the blood then coming from the surface of the intestinal mucosa passes through the liver by the portal circulation. At the same time, you must here note that there exist accessory portal veins which Sappey described in 1859, and which are divided into five groups, to which he gave the names of *gastro hepatic group*, *cystic group*, *group of nutrient veinules*, *group of the suspensory ligament*, and lastly *umbilical* or *para-umbilical group*.

To this portal circulation, which constitutes the dominant fact in the physiology of the liver as a blood organ, you must add the nutrient vessels furnished by the hepatic artery.

Now that you understand the dispotion of the hepatic circulation, let us see how this circulation is carried on. The absence of valves in the network of the vena portæ, the absence of surrounding muscular masses aiding by their contraction the movement of the blood, the presence of a capillary network which the blood has to traverse in the interior of the liver, and lastly the vertical disposition of the entire vascular network, are so many circumstances which oppose the passage of the blood from the intestine to the inferior vena cava.

But to these causes of retardation of the circulation, we must oppose those which favor the course of the blood. That which is superior to all others is assuredly respiration, which acts in two ways. In the act of respiration the diaphragm falls, it compresses the entire abdominal mass and forces the blood from the abdomen toward the vena cava.

On the other hand, by the respiratory movements a vacuum is created in the thorax, and the venous blood is, as it were, asperated into the right auricle.

Rosapelly who, in 1873, wrote an able thesis on the "Cause and Mechanism of the Circulation in the Liver," a thesis well worthy of being consulted for the full information which it gives as to all the details of the hepatic circulation, has made strikingly prominent this effect of the respiratory act. In fact, when in an animal you examine the blood pressure in the vessels which enter and in those which leave the liver, this is what you notice: the pressure in the vena portæ just before it enters the liver oscillates in the day between 7 and 20 millimetres of the murcurial column, while, on the other hand, in the veins that leave the liver, this blood pressure is only 3 to 4 millimetres, and even this is, so to speak, negative, and is ordinarily from 7 to 8 millimetres.

Inspiration is, as you see, one of the great factors of the hepatic circulation, hence everything which disturbs the respiratory movements, and in particular, every impediment to inspiration affects unfavorably the hepatic circulation and retards it, and we shall see what consequences are deducible from this fact when we come to examine the pathogeny of hepatic congestions and their treatment.

Besides this marked effect of respiration, and in particular of inspiration, on the hepatic circulation, we must also add that this circulation is aided by real contractions of the walls of the portal vein. The trunk of this vein possesses a muscular coat sufficiently developed to produce rhythmical beatings of the vein.

Rosapelly has also studied the quickness of the circulation in the postal network, by making use of the yellow prussiate of potash. On introducing one gramme of this substance into the portal vein, he finds this salt in the hepatic veins in eight seconds after its introduction. It is at end of from twenty-five to thirty seconds that he finds the maximum quantity, and in one minute there is no longer a trace of this salt in the hepatic veins. Here, also, the influence of respiration makes itself felt, and anything which impedes the breathing of the animal under experimentation greatly retards the appearance of the prussiate of potash.

In basing himself on experiments made, not on the liver of the living animal, but on the dead liver, and in making use of Ludwig's method of artificial circulations, a method of which I gave a description in my first lecture on the antiseptic liver, Rosapelly has arrived at this conclusion: In the portal vein the rate of the circulation is 33 millimetres a second; in the bifurcations of this vein, it is only 22 millimetres. The rate becomes much less in the capillary network, being only from 4 to 5 millimetres, while it is 16 millimetres in the hepatic vein.

Rosapelly has also studied the causes of obstruction to the circulation; he has demonstrated, first, this fact, that when the pressure of the blood in the hepatic vein is equal to that of the portal vein, the circulation is arrested. As for the arterial circulation, it stops as soon as the pressure in the hepatic veins rises, although still remaining very much less inferior than that of the portal vein. Hence he adduces this fact, that the circulation is much more active in the portal vein than in the hepatic artery, and it only requires a slight impediment to the circulation in the superior cava and in the auricle to rapidly entail modifications in the arterial circulation, *i. e.*, in the nutrient blood-flow which goes to the liver.

As for the quantity of blood which passes through the portal vein in twenty-four hours, it is considerable, for in a dog weighing 20 kilogrammes, Slogga found a blood-flow of 500 grammes per minute, which makes almost 721 kilogrammes of blood passing through the liver in twenty-four hours. Moreover, as Monneret has shown the liver may increase to triple its volume and weight under the influence of blood stasis. Lastly, you should not forget that the nervous system has a great influence on the hepatic circulation, which may be profoundly modified by lesions of the cord, of the sympathetic, and even of the pneumogastric.

I come now to the second part of this lecture, *i. e.*, to the modifications that the blood undergoes in its passage through the hepatic gland. Considered in their aggregate, these modifications pertain to the water, albumen and fats, as the following table shows:

	Water, per c'nt.	Album, per c't.	Fat, per ct.
Blood of the portal vein,	76.921	24.459	3.225
Blood of the hepatic vein,	68.646	16.763	1.686

It is a diminution in the proportion of water, of albumen, and of fat. The hepatic cell, then, must retain or modify the blood coming from the intestines, and if we consider that the vascular net-work absorbs from the surface of the intestinal mucosa, water, peptones and perhaps a certain quantity of fatty matters, we easily understand the important office of the liver which thus takes from the blood a part of its water, albuminoid substances and fats, which have found their way there from the alimentary canal.

How is this modification effected? Does a veritable combustion take place? This leads me to allude to one of the most delicate points connected with the liver as a blood organ. I refer to the liver as a producer of urea.

We may as well first settle the first question. The liver is, as Galen taught, an organ that generates heat, and this is sufficiently intelligible when we think of the numerous chemical processes taking place in the hepatic parenchyma.

When, in fact, we examine the temperature of the blood in the portal vein and in the hepatic veins, we notice that

this temperature is represented in the the following ratio :

Blood of the portal vein, ... 40.°2.
Blood of the hepatic vein, ... 40.°6.

As you see, the blood of the hepatic veins has a higher temperature than that of the portal vein. But I repeat, this is a secondary consideration, for it is easy to understand that the glycogenic function and even the secretion of bile may be the cause of this elevation; and I come now to the much more disputed question of the liver considered as a producer of urea.

Scarcely had urea been discovered in the urine by the younger Rouelle in 1772, than Fourcroix and Vanquelin affirmed that the variations in the production of urea were dependent on diseases of the liver; and the experiments of Heynsius, of Stokvis, of Fürher, of Ludwig, of Meissner and of Cyon showed in multiple ways that the liver contained urea, and that the blood which traverses this gland becomes charged with this principle.

Murchison in 1874 summed up the investigations, and also concluded that urea exists in considerable quantity in the liver and is formed there.

Lastly, in an article which attracted great attention, Brouardel in 1875 came to the following conclusion, viz., that the quantity of urea secreted in twenty-four hours is dependent on two principle influences: 1, the integrity or alteration of the hepatic cells; 2, the greater or less activity of the hepatic circulation.*

Nevertheless, this view was not admitted by all, and a great number of physiologists were disposed to adopt the view expressed by Dumas, who taught that urea resulted from the oxidation of azotized matters in the entire economy, an opinion based on the celebrated experiment of Bechamp, who showed that in oxidizing albumenoid matters with permanganate of potash we obtain urea, and it is admitted that there is always a direct relation between nutrition and the production of urea.

Hence, the opponents of the theory that the liver is exclusively a producer of urea took the ground that if in diseases of that organ we observe a diminution in the excretion of urea, it is because they entail by themselves a profound disturbance in the general nutrition.

Among the opponents of the exclusive doctrine we must also claim those who taught that the kidney fabricates urea, regarding the renal parenchyma as a veritable gland; and this view was chiefly maintained by Hoppe and Seyler, Hopples and Talesky. Nevertheless, despite these reservations, if we may trust the more recent experiments of Slosse it seems experimentally demonstrated that when you destroy the hepatic cells by the procedure which consists in ligating the intestinal arteries (an operation which entails the death of the hepatic cells*) the excretion of urea disappears.

It seems then to-day demonstrated that if the organic combustions may fabricate urea in all points of the economy, it is, nevertheless, to the liver that the most important role in urea-production belongs.

Physiologists have even endeavored to carry the inquiry further, and to ascertain from what elements the liver fabricates urea, and some have supposed that it is with ammonia and an azotized radical that urea is thus constituted. They have appealed for support of this opinion to the experiments undertaken by Minkowski, Naunyn and Stern, who extirpated the liver in animals and detected ammonia in the blood and excretions. Nevertheless the fact does not seem to be absolutely demonstrated, and the results appear to be different, according to the animal under experimentation.

Neubelthan, in vivisections on frogs arrived at results almost similar, for in examining the urine of frogs from which he had removed the liver, he found ammonia.

This is not the only function affecting the blood which the liver exercises. It remains for me to speak now of its hæmatopoietic functions.

You know, as I have already told, that the liver was considered by the ancients as a blood-making organ, and you will see that recent experiments tend to justify

*Brouardel, Urea and the Liver (*Archives de physiologic*, 1875, p. 373-551.)

*Slosse. Does the liver form urea? (*Jour. de Medicine de Bruxelles*, July 20, 1891, p. 417).

Galen's hypothesis. Only, the opinions which have been put forth on this subject are absolutely contradictory, some affirming that the liver forms blood corpuscles, others that it destroys them.

Lehmann, defended the first of these views, and by relying on experiments made on dogs and horses, he always found in the hepatic vein more corpuscles than in the portal vein. Below is Lehmann's table ;

In 1000 parts of the blood of a horse.	Portal vein.			Hepatic vein.		
	I	II	III	I	II	III
Globules,	601	573	257	776	745	573
Plasma,	399	427	743	224	259	427
In 1000 parts of the blood of a dog.						
	I	II	III	I	II	III
Globules,	460	447	450	675	650	748
Plasma,	540	553	550	305	350	252

This view has been combated by Schultz and Mandl, who have affirmed that the liver destroys the red globules through the action of the choleates, and that as a consequence of this destructive action, we have hæmaphein and perhaps bilirubin.

But since the processes of enumeration of the globules have been perfected, there seems reason to believe that the liver has little action on the blood, and if there is any at all, it is rather destructive than productive of red globules.

These, moreover, are Hayem's figures, showing the difference which exists from the point of view of the number of globules between the blood of the portal vein and that of the hepatic veins:

BLOOD OF THE PORTAL VEIN.

Red Globules,	7,773,000
Hæmatoblastes,	238,000
White Globules,	6,350

BLOOD OF THE HEPATIC VEIN.

Red Globules,	7,700,000
Hæmatoblastes,	228,000
White Globules,	7,900

As you see by this analysis, the blood of the portal vein is richer in globules than the blood of the hepatic veins, but the difference is very slight.

To finish what pertains to the role of the liver in nutrition, I will say a few words about the action of the liver in the production of fat.

Many physiologists have maintained that adipose tissue is not formed directly from fats in the ingesta, but is made in the liver, out of hydro-carbon and even albuminoids. In some experiments made on animals, and in particular on geese, Boussingault, after Liebig, showed that the quantity of fat accumulated in the organism of these animals much exceeded that contained in the corn on which these animals were exclusively fed.

Persoz stated the view more clearly, and maintained that in geese, and probably in other animals, the liver had for its function, and as far as adipose formation is concerned, the exclusive function to transpose starchy matters and sugar into fat.

This view is somewhat exaggerated; it is probable that the entire economy participates in this transformation, and when speaking of Diet in Obesity, I took up this subject of the formation of fat and showed that obese persons transform starch and glucose into fat to a much greater extent than they assimilate fatty substances contained in their food.

Having finished what I had to say about the properties and offices of the liver, I shall in the two following lectures speak of the pathological deductions which flow from these facts. The first shall be devoted to hepatic congestions, the second to cirrhosis. In a final lecture I shall take up the treatment of hydatid cysts.

Annotation.

PARASITISM.

ONE of the most important sociological inferences may be drawn from the demonstrated effects of a free, relatively highly organized animal descending to parasitism. As soon as it is habituated to drawing its sustenance from its host it becomes a veritable living gut, eating, drinking and excreting, losing its brains, eyes, ears, respiratory and locomotory organs, as useless in its new state.

For identical reasons, many offspring of wealthy parents undergo comparable degradation into simpering, brainless, worse than effeminate chatterers. When the rich consent to being educated, they will see the need of their children having some useful occupation, not one to increase their money accumulation, but one

that will develop intellect and avoid their earning the vulgar but apt title of "gut," or parasite, fop, dude, or other equivalent.

It would not be believed by the cane-sucking, monocled "sassiety-man" of wealth, that the shoemaker, blacksmith, and even the street-sweeper are his intellectual superiors. What they do has some useful end, however humble. The human parasite has no need for any organs but entrails, and a few generations of him develop his descendants figuratively and morphologically in that direction.

S. V. CLEVENGER.

HABIT CHOREA.

WIER MITCHELL aptly distinguished as "Habit Chorea" the facial grimacing often seen in adults and frequently improperly diagnosed as ordinary chorea.

Recent experience leads me to look for astigmatism and myopia as causes, the cause of the trouble not being recognized by patient or relatives, and the facial contortions are but ineffectual reflex attempts toward better vision. Nor need this statement that astigmatism and myopia is an occasional cause of the "habit chorea" facial spasms be distorted into a "Steven's-fiasco" admission that pregnancy, epilepsy, all insanities, kidney disease, hæmorrhoids, quinsy, inebriety, flatulence, constipation, old age, etc., are caused by ocular troubles to be remedied by snipping of recti muscles.

In Chicago we have a rectal fiend (homœopath) who, for a consideration, will cure everything by paralyzing the sphincter ani. Every train brings him patients, and he makes $25,000 yearly where honest, intelligent physicians starve.

S. V. CLEVENGER

70 STATE STREET.

VACCINATION PAYS.

WE do not always realize the blessings we have in the immunity from escapable evils. The following statement should make us grateful for vaccination and encourage the fight against anti-vaccinationists. During the past season small-pox has invaded the ancient city of Van, the Armenian capital of Asiatic Turkey. It is a place where there is no vaccination among the native population, and where pianos are brought in from Surria by men lifting by means of poles attached to the boxes. A lady saw in a ride through the city five cases of small-pox playing in the streets. Certainly panic did not kill the two thousand persons who died of small-pox in this epidemic. *Cases were not reported!*

Population 35,000. 57 cases to the 1,000. Taking the population of New York at 1,700,000 this mortality would be about 96,597 deaths in one season. Most of the two thousand deaths were children. Adults escape simply as they have had it and got well. During this epidemic Van was quarantined against cholera, and not a case occurred in the city, and yet there was no vaccination, when there was one death to every 17.5 population.

What lessons may we learn from these ethics of Van. Certainly one lesson is to acknowledge our debt of gratitude to vaccination and be vigilant in having the public avail themselves of it continuously.

E. C.

DREARY READING.

THE dreariest reading that comes to our exchange table, is to be found in the alleged "Health" and "Temperance" publications. Why does not some enterprising citizen cut the ancient saws, the chestnutty anecdotes, the endless repetitions of good advice that nobody wants and moral platitudes that nobody reads, and substitute something interesting? Something that is alive; useful; modern; real; practical; something tangible to work on, to talk about, to read to one's neighbor, and argue and get excited over; something that will arouse the stagnating nervous currents and quicken the intellect. We have a kindly regard for the man who tried to start a crusade against bread, as being a rank poison; for, in the effort to reply, some persons learned more of physiological chemistry than they ever knew before. We would suggest as a new topic, the advocacy of public urinals, as a means of promoting temperance and hygiene at the same time. This is one of the obviously needed reforms, that only require public agitation to render them successful.

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TREATMENT OF SYPHILIS.

THE following sketch has been written in response to repeated requests for a detailed exposition of the treatment of syphilis and of the principles on which it is based. Although the matter is one of the simplest and best defined in the whole range of medicine, we continually see physicians following false lights and slipping up in their practice for want of attention to the plain facts of the case. The present position of the best modern syphilographers may be briefly summed up as follows:

1. The special cause of syphilis is to be found in the tissues whose growth is due to this cause; the syphilitic tissues.

2. These tissues have less vitality than the normal tissues of the body, and tend to spontaneous destruction, breaking down into ulcers readily.

3. Mercury, given in sufficient doses, tends to produce destructive changes in both healthy and diseased tissues.

4. As the syphilitic tissues are of lower vitality than the healthy tissues, the destructive process can be produced in the former by a smaller dose of mercury than in the latter.

5. Experiment will show how large a daily dose of mercury can be borne by each case without causing salivation; and this daily dose can be given for an unlimited period.

6. If at any time symptoms of salivation manifest themselves, the dose must be lessened, slightly, but not omitted altogether; while if no such symptoms are presented after some weeks' medication, the dose should be gradually increased. The object is to obtain the greatest possible effect on the syphilitic tissues without effecting the healthy tissues injuriously.

7. The treatment should be continued for several months after every *obvious* indication of syphilis has disappeared.

In practice, each one prefers the form of mercury, with which he is most familiar. I have employed all the known forms, and prefer the most active preparations, because they *are* most active, and most easily regulated. In all cases it must be remembered that when a syphilitic neoplasm has been formed, it has destroyed some normal tissues that will never be reproduced. When a gumma appears in the brain, some of the nerve fibers are broken, some compressed. Remove the new growth and the compressed fibers resume their functions; but it is very problematic if the broken ends ever unite. For this reason it is a good rule to go to work with briskness, and to bring your syphilitic patient rapidly under the influence of the mercurial. In reality there *is* an action on the normal tissues as well as on the diseased. While a patient is taking an active mercurial course the vital processes are all accelerated; waste is increased enormously, and old accumulations of water, fat and detritus are carried out of the body. Patients have the same

curious sensation of regeneration that is experienced during convalescence from septic fevers; only that during the mercurial course there is a real increase in the vital forces, whereas in convalescence it is only apparent.

Suppose we choose the mercurial pill as our best agent. A man will take from twenty to thirty grains daily, with good effect. We begin with ten grains and add two each day. When we have reached twenty grains the patient's gums begin to show signs of approaching ptyalism, sponginess, tenderness of the teeth on biting hard substances, etc. Then we drop to eighteen grains daily, and continue. In a few days the signs of ptyalism are still present, and we drop to sixteen grains. Then the signs disappear, and if they do not return in two weeks, we begin to creep back to the larger dose. If, however, we find that, whenever we touch twenty grains a day, the gums become tender, we settle down to eighteen grains and adhere to that dose, unless forced to lower it.

I prefer to give the blue mass alone, with no opium, preferring to let it run off by the bowels, the kidneys and the skin. The free elimination is beneficial, as is shown by the success of the Hot Springs treatment, and by the moderate usefulness of vegetable eliminants. In all cases, at all ages, where mercury can be employed at all, the blue pill answers every useful purpose, and no other mercurial is required.

But scrofulous persons cannot take mercury very well. The tendency to spontaneous degeneration of tissues, with suppuration or ulceration, is sufficient in some of these cases to render mercury inadmissible. If the blue pill cannot be used, the astringent salts may be employed, but are generally quite as harmful. It is better to build up the patient with good food, quinine, cod-liver oil, and especially the iodide of iron; the iodides of sodium and potassium also are of value, as they seem to keep the disease in check until the patient is strong enough to take mercury. Some can never reach the mercury point, and for them the iodides must be permanently substituted. These remedies require much longer periods; if, indeed, they ever thoroughly eradicate syphilis from the system, which I doubt. However, if scrofulous people contract syphilis, they must be content to take iodides the rest of their lives, if need be.

Gold and platinum have properties similar to those of mercury, but have no advantages to make amends for their higher price. The same rules govern their administration.

Congenital and infantile syphilis require the same treatment as the other forms; the same preparation, and the same method of ascertaining the largest dose that can be given with impunity.

When it is desired to act quickly, as in cases of cerebral syphilis, the mercury may be given by inunction, hypodermic injection and fumigation, and the iodides added, in heroic doses. The object is here to check the syphilitic process as speedily as possible, at all hazards, before irreparable damage has been done to the delicate cerebral tissues. Ptyalism is a small danger in comparison, and the risk of its occurrence must be accepted, while the system is brought under the influence of mercury as rapidly as possible.

The hypodermic method must be still held as *sub judice*. Its advocates claim too much. Calomel is nothing but calomel, however administered; and that a grain or two injected under the skin once or twice a month exerts more effect than the regular administration during this period by the mouth, sounds like the assertion of an enthusiast rather than the sober judgment of a conservative man.

In all cases where there are accessible

litic lesions, mercury should be employed locally as well as constitutionally. The union of these two methods of administration accomplishes much more than either is capable of doing singly. The biniodide is my own favorite for local use; in solution or ointment. For the latter I prefer lanoline as a base.

In conclusion I would say that the best success will be obtained when this method is followed out neither rashly nor timidly; with judgment and persistence. If we give the powerful agent recommended, rashly and heedlessly, a salivation will occur of such gravity as to compel the discontinuance of mercury, and the disease will at once be reproduced, while our patient's confidence has been shaken. If the drug be given too timidly, the disease will keep abreast or ahead of the remedy, and the patient will become disgusted with its inefficiency, and go to some one else.

W. F. WAUGH.

ELIMINATION OF TOXIC AGENTS BY FREE PERSPIRATION.

IN *Science* W. H. Wooster describes the case of a little girl, bitten by some unknown venomous creature, and presenting symptoms betokening impending dissolution. The child was placed in a tub of hot water, enveloped to the neck in blankets, to induce sweating. A hot-pack followed, with stimulants internally. Within fifteen minutes the threatening symptoms began to subside, and within an hour the child was well.

The elimination of toxic substances by means of profuse sweating is not a new, but rather a neglected, idea. Cases of suppositious hydrophobia have been reported, in which recovery followed the action of a full dose of jaborandi. The same agent has been given with asserted success for the toxic symptoms following bites of venomous serpents, scorpions and spiders.

The writer has been informed, by the proprietor of the leading Turkish bath establishment in Philadelphia, that several such cases have been treated successfully by these baths. It is well known that ordinary alcoholism is speedily dissipated by the Turkish bath. A man may be brought in, in alcoholic coma, "paralyzed drunk," and within an hour he walks out with head erect, perfectly sober. Such cases are numbered by hundreds and thousands at the establishment referred to. The same success has been obtained in the treatment of several cases of opium poisoning; while the writer can testify to the great value of the Turkish bath as an adjuvant in the treatment of the alcohol and of the opium habits. It is also the surest and safest means of aborting an acute catarrh, of the nose, larynx or bronchi; while we have been informed by credible witnesses that it is equally effectual in the earliest stage of specific urethritis. No more effectual remedy can be found when uremic symptoms supervene in the course of a chronic nephritis. Indeed, in all forms of Bright's disease, the Turkish bath is of the utmost value.

When headache, rheumatoid pains, indigestion, etc., indicate the presence of the uric acid diathesis, the best of all eliminants is this bath. In true gout, it takes the place of active bodily exercise when the latter cannot, or will not, be taken. Whenever the blood is charged with the products of imperfect digestion, or of waste, the speediest, pleasantest and most effectual means of elimination is to be found in this system of manipulations and sweating.

As to influenza, opinions appear to differ; although it is not easy to find anyone who claims that the Turkish bath does harm, while hundreds are enthusiastic over it as a means of prevention or of cure.

This subject might be pursued at much

greater length; but enough has been said to show that in the Turkish bath we have an agent of remarkable power as an eliminant, and whose therapeutical applications are only beginning to be understood by the profession.

Letters to the Editor.

ECZEMA WITH ANGINA PECTORIS.

I AM an old broken down physician who has for four years suffered from eczema of the right leg. It extends from the thigh to the ankle. It began as a popular eruption on the outer aspect of the leg, and extended over my whole body within several months. The eruptions then subsided in part, but remained permanently fixed in the locality first attacked. For over four years I have suffered with almost unbearable burning, itching and pain. The affected part swells and aches. It seemed to be an eczema of the squamous variety; the skin was dry, and when scratched appeared white and branny. At present it is too tender for scratching, and is disposed to inflammation and suppuration.

At the time the eruption receded, I was seized with symptoms resembling angina pectoris, *i. e.*, a choking sensation at the neck and in the cardiac region, with pain extending to the left shoulder and down that arm to the hand. This gives me no trouble at present, except after sudden exertion or when I am slightly fatigued, when I feel it slightly.

My general health is good; I am of full habit, have good appetite, am 68 years old, and weigh 168 lbs. My teeth are so bad as to hinder the thorough mastication of my food. I use a good deal of tobacco. I would like to have your opinion of my case and your suggestions as to its treatment.

G. W. STORY, M. D.

[The eczema at present requires soothing applications, such as bismuth subnitrate in fluid petrolatum—one part to ten. This should be applied until the irritation has been subdued, and then an ointment of ammoniated mercury, in lanoline, one part to twenty, substituted. Internally, the sulphide of arsenic should be given, in doses of gr. $\frac{1}{134}$, three times daily, gradually increased until the effects of the arsenic begin to appear. Brucine may be added as a heart tonic, gr. $\frac{1}{67}$, thrice daily, increased to gr. $\frac{1}{12}$. These remedies should be continued for a long time, unless they disagree, when others should be substituted; such as tar ointment locally, and the compound syrup of hypophosphites internally. The digestion should be carefully regulated, and all food forbidden that has shown any tendency to aggravate the irritation. All washing of the leg is to be forbidden; the ointment once applied is not to be removed unless to make way for another, when a change is decided upon. If the state of the heart permits, an occasional dose of pilocarpine will be of much value; enough to cause some sweating, but not too much.—W. F. WAUGH.]

QUERIES.

I have just received the Gonorrhœa Number of THE TIMES AND REGISTER and want a copy for a young friend. Please send me one for which I enclose ten cents. Please give me your ℞ for the bismuth and fluid petrolatum mixture for injection and how often to use it. I did not know that there is fluid petrolatum. If you use oil as the menstruum, what kind of oil do you use?

Do you use the bismuth sub-iodide of the same strength as the sub-nitrate? How is boric acid for an injection, two or three grains to ounce of mucilage?

Which is the better work to refresh my old and failing mind, Professor Osler's of John Hopkins, Baltimore, or a recent treatise on the Practice of Medicine by Professor Lyman (I think) of Chicago, I want a compact practical work which gives the best treatment at the present time with the best selected remedy. Your special numbers are gems of the purest rays and greatly enhance the practical value of your journal. Glad to learn of your addendum on Typhoid Fever. May you prosper greatly in your valuable labors to advance the best treatment of diseases.

G. H. A.

[The sub-nitrate of bismuth or sub-iodide may be employed in the same doses. Either may be mixed with fluid petrolatum, or fluid cosmoline, in the proportion of one part to ten, and used as an injection without any other ingredient. This oil is the least likely to be irritating from rancidity, and in itself exerts a beneficial action on inflamed surfaces.

Boric acid is a feeble agent, and in the strength of five grains to the ounce of mucilage will not do much harm—or good.

Osler's new work on Practice of Medicine is fully deserving of your confidence. The path-

ology is fully up to date, and given in admirably distinct and simple diction. The treatment is conservative, and trustworthy, as far as it goes. I have not seen the Chicago work you mention, but anything of Lyman's should be good.—W. F. WAUGH.]

CHOLERA IN ANTWERP.

IN conversation with one of the physicians of this city, I requested him to give me a little sketch of his personal experience with the cholera, which existed in a sporadic condition in Antwerp the last Summer.

All his cases, he said, existed among the boatmem belonging to the barges which transport freight to the interior of Belgium and France through the Canals.

He attributed the existence of the disease to the fact that the bargemen drank the water from the canals, as proof of which, after the authorities supplied them with city water, he had but three cases in one week, whereas the week previous he had fifteen.

The patients were treated on the boats, provided there was any accommodation; otherwise they were taken to the hospital, when a special building had been set aside. The boats and occupants were isolated the effects of patients disinfected, as well as clothing and persons, and in no case did the disease spread beyond the person affected.

The treatment in all cases was about the same. Salol, beta naphthol, bismuth, camphor, ether and the milder opium preparations. Ice and citric acid drinks in large quantities, warm sand bags and hot water to the abdomen. Intravenous injections of saline fluids were not tried with his private or hospital service, being considered too dangerous, besides they were not supplied with the necessary apparatus. This method was employed in several universities in Belgium with but slight success. Two of his cases died without vomiting or passing a stool.

One, a woman seven months pregnant, died in two hours. The other, four months pregnant, died in three hours. He treated in all thirty-seven cases, of which thirty-five died; a boy thirteen and a man thirty-five being the only survivors. The general mortality was not so bad in this city, however, being I think, under fifty per cent.

Cholera was never epidemic in this city during the past summer. There was no connection between cases, all being isolated ones. The smaller tradesmen and hotel proprietors suffered from the absence of tourists, who were deterred from coming here on account of the exaggerated reports. The general business of the city and port was not affected, and one living here would not have been aware that the plague existed within the city.

T. C. SANGREE, M. D.

ANTWERP, BELNIUM.

News and Miscellany.

Deaths and Interments in the City of Philadelphia from the 5th to the 12th of November, 1892.

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	1		Hemorrhage		1
Aneurism of the Aorta.	3		Hernia		1
Alcoholism	2		Homicide	2	
Apoplexy	16		Inanition		3
Asthma	2		Inflam'n Bladder	2	
Anæmia	2		" Brain	2	2
Bright's Disease	14	1	" Bronchi	8	3
Burns and Scalds	2	2	" Kidneys	7	
Cancer	9		" Larynx		1
Casualties	8	2	" Lungs	28	13
Congestion of the Brain	1	1	" Heart		2
" Lungs	1	2	" Periton'm	7	
Cholera Infantum		5	" Pleura	1	
Cirrhosis of the Liver	2		" S. & B'wls	1	4
Collapse of Lungs		1	" Parotid Gland		1
Consumption of Lungs,	46	6	" Spine	1	1
Convulsions		9	Marasmus		14
Croup		1	Neuralgia of Heart	1	1
Cyanosis		5	Obst'n of the Bowels		3
Debility	4	1	Old Age	8	
Diabetes	3		Purpura Hemorrhagica		1
Diarrhœa	2	1	Paralysis	4	1
Diphtheria		49	Poisoning	1	
Disease of the Heart	24	2	Rheumatism		1
" Liver	1		Surgical operation	3	
Drowned	1		Suffocation		2
Dropsy		3	Suicide	3	
Dysentery	2		Teething		1
Epilepsy	1	1	Tetanus	1	1
Fatty Degeneration of the Heart	2		Tumor	2	1
Fever, Intermittent		1	Ulceration of the Stomach	1	
" Malarial		1	Uræmia	5	
" Scarlet		9	Whooping Cough		2
" Typhoid	2	1			
Goitre	1		Total	243	161

Francis Murphy is conducting meetings in Cincinnati to boom Keeley. The *Lancet Clinic* says: "He ascribes 'salvation from drink to the grace of God *and the wonderful Keeley cure*.' Our impression is that if the former is inefficient, there is no use of trying the latter; and we decidedly object to the two being coupled together in the above sacriligious manner. If there is anything on this footstool that the grace of God is not sufficient for, it must be the methods adopted by these institutions."

The Times and Register.

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PAGE.

ORIGINAL ARTICLES:

PUERPERAL ECLAMPSIA WITH REPORT OF CASES TREATED WITH NITRO-GLYCERINE. By R. M. Harbin, M. D. 577
PLEURISY. By E. S. McKee, M. D. 580
TREATMENT OF PNEUMONIA. By E. S. McKee, M. D. .. 582
PROGRESS IN SURGERY 584
TREATMENT OF CHOLERA BY STRYCHNINE. By Surgeon-Lieut-Colonel Joshua Duke, I. M. S. 585

EDITORIAL:

NATIONAL QUARANTINE 586
STRYCHNINE FOR SNAKE BITES 586

NOTES AND ITEMS ..... iv, x

PAGE.

LETTERS TO THE EDITOR:

Two Typical Cases of Epistaxis, Treated by the "Umbrella Fashion." *T. G. Stephens, M. D.* 587
Catching Cold and its Action in Intestinal Affections. *Gould Smith, M. D.* 587

THE MEDICAL DIGEST:

Therapeutic Notes. *Translated by E. W. Bing, M. D.* 589
Treatment of Double Pneumonia 592
Continued Remittent Fever 593
Section on Orthopædic Surgery 594
Anæsthesia in the Light of Physiological or Chemical Research 597
The Use of Nitrous Oxide in Minor Surgery and Its Combination with Ether 599

Original Articles.

PUERPERAL ECLAMPSIA WITH REPORT OF CASES TREATED WITH NITRO-GLYCERINE.

By R. M. HARBIN, M. D.

CALHOUN, GA.

PUERPERAL Eclampsia usually receives its share of discussion in the meetings of medical societies, since the nature of the disease is not thoroughly understood and it being a disease with such a heavy mortality. The busy physician in a general practice does not meet with a great number of cases of eclampsia during a lifetime, since statistics show that it only occurs once in 500 pregnancies. A physician never feels that he needs the assistance of a professional brother more than he does when a case of puerperal convulsions is thrust upon him. The history of eclampsia involves many theories as to its pathology and morbid anatomy. As late as 1840 it was regarded as a neurosis with very obscure pathology. In 1842 Dr. Lever reported in "Guy's Hospital Reports" having observed the presence of albumen in the urine of eclamptic patients and later the close resemblance between puerperal and uræmic convulsions was pointed out. Nephritis was found in most instances coincident with eclampsia. The Traube-Rosenstein theory maintained that a state of hydræmia was produced by the loss of albumen and when sudden aortic pressure was increased, it caused œdema of the brain with subsequent anæmia of the hemispheres. In cases without nephritis and albuminuria, a reflex influence is supposed to radiate from the uterus through the sympathetic nerves to the kidneys, causing acute suppression of urine.

Clinical History.—The usual symptoms are: headache more or less intense and usually confined to one side, vertigo and dizziness, confusion of ideas, loss of memory, double vision, flashes of light before the eyes, despondency, blindness, ringing in the ears, nausea and vomiting, œdema of the face, extremities and labia majora, and albuminuria. If occurring during the progress of labor, a calm precedes, and the patient sinks into a restful sleep, soon to awake with a convulsion. The convulsion lasts from a half to one minute, and the face becomes cyanotic as a result of tetanic condition of muscles of respiration. Afterwards the patient sinks into a more or less deep coma and has stertorous breathing.

Prognosis is grave, the best statistics showing a mortality of 26 per cent. The mortality is greater where convulsions commence during or before the first stage of labor, being 40 per cent. In the cases I wish to report, the convulsions commenced in one before labor had begun and in the other they occurred before the labor had made any material progress.

Case 1. Mrs. P. a blonde of small stature, age 47, the mother of nine children, the youngest being four years old. Previous labors rapid and easy. Was called to see her September 10th 6 A. M., that being the end of eighth month of gestation; having had five violent convulsions at intervals of about an hour, with profound coma and stertorous breathing following. The skin was dry and glossy and face and extremities œdematous, pulse 60 and bounding. She had been suffering for about six weeks with nausea and vomiting, scanty urine and occasional diarrhœa, vertigo and dizziness, general muscular pains and œdematous feet; these being the symptoms of albuminuria. At seven o'clock, another convulsion came on with violent contortions and opisthotonos, lasting about three-quarters of a minute and afterwards sinking into a more profound coma. ¼ grain of morphia and 1-100 grain atropia were given hypodermically, and 30 grains bromide and 15 grains chloral per enema and also 1-100 grain of nitro-glycerine hypodermically. A little later three or four ounces of epsom salts dissolved in a pint of warm water were given per enema. Cold cloths were applied to the head and a soft catheter was introduced into the cervix. In another hour the convulsion was repeated with less severity, and about a pint of blood was then taken from the arm and 1-100 grain of nitro-glycerine was repeated hypodermically. Coma now was not so profound and stertorous breathing was less marked. The woman having a lax abdomen the position of child was made out to be transverse, and no presentation could be discovered by a vaginal examination. The position was easily rectified and soon the vertex could be felt. About half a pint of urine was now drawn, having a specific gravity of 1010, and heavily loaded with albumen. No quantitative estimate was made. The pulse at this time was 80, very compressible and weak. The patient remained comatose for four hours, that is until twelve o'clock, and by kneading the womb and manipulating the cervix some pains started up and the membrane was soon ruptured artificially, the patient being in a semi-conscious state. At three o'clock an asphyxiated child was delivered, but was resuscitated in an hour by artificial respiration. When I had begun to manipulate the womb for the purpose of expelling the placenta another convulsion recurred with less severity than the preceding. Twenty grains of bromide and 10 grains of chloral and ¼ grain of morphine were repeated as before. The patient remained in a stupor for seven hours, from which she aroused and continued to improve. All the swelling had disappeared at the end of twenty-four hours and she made an uneventful recovery.

Case 2. Mrs O. blonde of medium stature, age 18 years, a primipara, previous health negative, suffered for several weeks previous with nephritis and albuminuria. There was an unusual amount of swelling in the face. Transient labor pains came on March 1st 4 P. M., and continued until eleven o'clock without any perceptible progress towards dilatation of the cervix. Then she had three hard convulsions at about half-hour intervals and then three more of milder severity. Patient could be aroused from stupor only to a slight extent. During the time of convulsions 60 grains bromide and 30 grains chloral were taken, and 1-100 grain tablet of nitro-glycerine was placed in the mouth every hour until three were taken. A lowered state of arterial tension was indicated by the pulse. This was sufficient to control the convulsions and at 5 A. M. a heaping tablespoonful of epsom salts was given and a soft catheter was introduced into the cervix to stimulate pains. The skin which had been previously dry now became moist, and labor progressed normally but tediously for forty hours after the last convulsion, and the patient made a good recovery.

As to the physiological effects of nitro-glycerine on the pulse, the sphygmographic tracings indicate an extremely low state of arterial tension; and according to Ringer, it produces great arterial relaxation. When it is injected into the jugular vein the heart is speedily arrested. Nitro-glycerine has a paralyzing effect on the muscles, motor nerves and reflex function of the spinal cord. All of these effects recommend its use in eclampsia. It is harmless and rapid recovery is made from large doses of the drug. It is used in other diseases, as in angina pectoris

and epilepsy, where there is spasm of the coronary arteries and localized arterial spasm in the brain. Nitro-glycerine is also used in acute and chronic Bright's disease, having its effect through the renal ganglia by lowering peripheral arterial tension. It is said to increase the quantity of urine in chronic parenchymatous nephritis. In physiology we are taught what an influence the nervous system exerts over the excretion of urine, as in hysteria, fear, anxiety, &c. Also that irritation of the floor of the fourth ventricle produces artificial diabetes.

Nature.—Our conclusion as to the nature of puerperal eclampsia is that a neurotic element is brought to bear in the precipitation of a convulsion in most cases, and that there is an increased reflex excitability of the sympathetic nerves in the pregnant state, being more marked toward the close of pregnancy. A direct connection has been demonstrated between the nerve filaments of the uterus and the ganglia of the kidneys. And when uterine contractions are set up this reflex excitability in susceptible subjects is exaggerated, causing vaso motor spasm of the arterioles of the kidneys, thus producing acute suppression of the urine and the consequent symptoms of uræmia. The mere mechanical irritation of the uterus in the placental period has been known to provoke a convulsion, and this would indicate the close relationship between uterine activity and the causation of convulsions. This would serve to explain cases of eclampsia occurring without pre-existing albuminuria, and it is very obvious that the sudden suppression of urine can only result from a disturbance in the renal circulation, since in a great majority of cases there are no post mortem traces. But most cases of nephritis of pregnancy have convulsions, and we can readily see that a catarrhal condition of the tubules of the kidneys and albuminuria existing, a small amount of vaso motor disturbance of the circulation in the kidneys diminishing the amount of urinary excretion would throw more of the excrementitious principles into the blood already overcharged, thus causing a convulsion more easily. Then too the presence of a catarrhal condition of the tubules of the kidneys might of itself cause an increased tendency to a reflex vaso motor spasm of arterioles of kidneys. A similar instance is furnished when a catarrhal bronchitis serves to provoke an attack of bronchial asthma where a predisposition exists. We therefore conclude that this reflex vaso motor influence is more or less causative in all cases of puerperal convulsions and is oftener present in cases where nephritis is more marked.

The therapeutical application of nitro-glycerine seems very plausible, its effect being to relax spasm of arterioles of kidneys, renders it an invaluable agent in eclampsia. While I would not rely on it to the exclusion of other accepted remedial agents, as bromides, chloral, venesection, morphine, chloroform, &c., yet I regard it a very valuable adjuvant, and in it we have a harmless drug not attended by any special risks. The good effects of nitro-glycerine in these two cases seem unequivocal, for in both cases the convulsions came on before labor had made any material progress, and of course in these cases eclampsia has its heaviest mortality, and in both cases well marked nephritis and albuminuria existed. In Case 1 the convulsions came on at the close of eighth month of gestation, and I had to get them under control and then try to arouse uterine contractions, Everything was at a disadvantage except a roomy vaginal outlet. In Case 2 I regard the good effects of nitro-glycerine as still more striking, for after controlling the convulsions the labor continued forty hours without a recurrence.

In conclusion I would like to briefly report a case of eclampsia with some unusual characters, having had ninety-three convulsions and death on the sixth day. Mrs. G, age 25, previous health good, stoutly built, mother of two children, and previous labors normal, was taken with a spasm, Tuesday, December 9th, 1891, at 10 A. M. Had been suffering for several days with intense headache and swelling of the feet. The first fit was of moderate severity and caused considerable stupor.

At 1 o'clock P. M., convulsion was repeated and pains began, and, after having had five convulsions, delivery was accomplished at 6 P. M. Urine was drawn and found to be scant and heavily loaded with albumen. The usual remedies were ap-

plied, but to no effect, and patient continued to have convulsions at regular intervals, and died on the sixth day, having had ninety-three convulsions.

I also have in mind another patient, a primapara, age 18, that had five convulsions, commencing twenty-four hours after delivery, ending in recovery. The usual treatment was adopted.

*Read before the State Medical Society of Alabama, Georgia and Tennessee.

PLEURISY.

By E. S. McKEE, M. D.
CINCINNATI.

A CASE is reported by Ferret which he terms typhoid pleurisy, in which the typhoid bacillus of Eberth was found in abundance. In addition to pleuritic symptoms the patient manifested the general signs of enteric fever excepting the rose spots. Mr. Ferret was of the opinion that the pleurisy was the antecedent manifestation of the typhoid fever and that like the latter it was set up by the bacillus of Eberth. Eberth's bacillus has been found in a hemorrhagic pleural effusion by Charrin and Royer.[2] These cultures, very virulent in mice, gave rise in the guinea pig to bloody effusions in the pleura and peritoneum.

The aetiology of primary pleurisy is described by Patella [3 8] as follows: There are sero fibrinous pleurisies due to the encapulated micrococcus of Fraenkel: pleurisies with abundant effusion of exclusively tuberculous origin. In tuberculous individuals, a pleurisy may sometimes take on a simple non-tuberculous form. There are also pleurisies of chemical origin which are still insufficiently known. He thinks it belongs to clinical rather than bacteriological researches to determine the cause and nature of primitive pleurisies. In all cases where bacteriological research shows the presence of the diplococcus of Fraenkel we may hope for the spontaneous resorption of the exudation.

Renze[3] has become convinced by his bacteriological researches that pleurisies are caused, according to the prevalent epidemic constitution sometimes by the diplococcus of Fraenkel and sometimes by the streptococcus, thus during the last epidemic of influenza, streptococcus pleurisies predominate. He admits the curability of tuberculous pleurisy.

Bozzolo[4] observes that the microbe of typhoid fever provokes pleurisy oftener than one would suppose.

The aetiology of pleuritis according to Patella[4] is due, in certain acute cases to nothing else than an infection through the diplococcus lanceolatus of Fraenkel. Some other pleurisies are tubercular alone.

Calcareous degeneration of the pleura is reported by Polaillon.[4] A subject of great interest to the surgeon and physician especially in relation to paracentesis and resection of the rib. Pathological research shows this is first developed through hyperplasia of the subendothelial connective tissue of the parietal layer of the pleura, they are seldom if ever, of purely pulmonary origin. Traumatism is the most frequent cause of their development. Diagnosis by physical signs is seldom possible.

Pulmonary gangrene is given great prominence as a cause of putrid pleural effusions by James.[6]

That encysted pleural effusions ar quite frequent is maintained by Simon.[7] He also claims that the encysting may take place either in the upper or lower part of the chest.

Diaphragmatic pleurisy is reported by Rastamenla.[3] The patient was at first supposed to be suffering from bronchopneumonia. He had great dyspnœa, respirations 42, pulse 130, temperature 140°. A physical examination of the chest revealed the absence of bronchopneumonia, and by method of exclusion the diagnosis of diaphragmatic pleurisy was reached. The after history of the case fully confirmed the diagnosis.

The movablilty of the pleuritic exudate is the subject of a study by Baccelli.[9] He thinks the best method by which to demonstrate the movement of the exudate is to examine the extent, the patient first sitting, then prone. The sero-fibrinous exudation changes its position with that of the body when it is small in quantity or when medium in amount and no strong pressure on the parenchyma of the lungs is occasioned. The thin serous fluids change their position faster than the sero-fibrinous ones.

In the diagnosis of consolidation of the lung from serous or purulent effusions Forcheimer (10) advises the serious consideration of the age of the patient. He seldom finds serous effusion under four years of age, empyema being most common at that period of life. He has been unable to utilize some of the fine auscultal signs that have been put down, for instance the greater transmission of sound in cellular fluids: they seem to him without value, especially in children.

The treatment of pleurisies in children is discussed by Plicque·[11] In the early treatment calomel and digitalis are recommended and a protest against the abolition of the poultice is recorded; he believes this aids absorption and prevents the progress of the disease to the purulent stage. Tapping should always be done at the first with the aspirator, an antiseptic fluid being used to wash out the cavity. Fluid should always be withdrawn slowly and gently, and the introduction of the antiseptic solution, (lukewarm boracic lotion is the best for the purpose) performed with equal care and deliberation. No fears need be felt in using large quantities of fluid to flush out the pleura; as much as 5 or 6 litres have been employed. If tapping fails to prevent the re-formation of the purulent fluid, an incision must be made and irrigation carried out in the same way. The anterior axillary line should be selected for the incision instead of the posterior as in the adult. In case of encysted fluid, the incision must be directly over the point of localization. Frequent and cautious washing out of the cavity is advised in after treatment. Estlander's operation is rarely necessary in the care of infants.

The question of the treatment of purulent effusions is still much discussed especially in Germany, where physicians are generally opposed to the operation for empyema, while surgeons favor it. Bozzolo[3] affirms that in his experience, simple puncture for empyema has always failed to cure; here costal resection is always indispensable.

Massage for pleuritic effusions has an advocate in Poliakow;[12] who has employed massage of the chest in 10 cases of primary pleuritic exudations, 7 being purely serous and 3 sero-fibrinous. The manipulations were made in the direction of lymphatics of the affected region, radiating toward the axilla. The treatment was commenced by light effleurage but soon brisk rubbing was resorted to followed by clapottement. The sittings which took place daily lasted from 10 to 20 minutes. Under this method the exudation disappeared in from 8 to 20 days while the other symptoms disappeared in from 9 to 35 days. Massage of the thorax in cases of pleuritic exudation acts as a counter irritant, similarly to blisters and the cautery, but has the advantage that it can be practiced every day. Aside from its irritant effects massage relieves the chest pains, invigorates the muscles and augments the volume of the respiratory movements, an action which exerts marked influence on the absorption of the exudation and the distension of the compressed lung.

The Salicylate of Soda in Serous Pleurisy.—Germain See[13] pointed out that the salicylate of soda, while curing the disease in acute articular rheumatism, prevented serous inflammation. Aufrecht [13] showed that this is an excellent remedy for idiopathic serous pleurisies whatever their origin. This was subsequently confirmed by Eichhorst,[14] Maragliano,[14] Stiller,[14] Drizawiecki,[14] Tetz,[14] Diri,[15] and Talamon.[16] According to Tetz and Talamon the curative effect of salicylate of soda in serous pleurisy is not less specific than in rheumatism.

Stritzover[17] reports 3 cases of exudative pleurisy in which he gave the drug internally in one gramme doses three times a day; as a precaution against collapse, the dose was always given after meals, each dose being followed by a draught of good wine. In severe cases the temperature rapidly fell to normal and the subjective condition improved, while in about a week the dyspnea was relieved and the area of dullness lessened. Every one of the patients completely recovered in about 18 days. In the 8th case, the treatment of 4 days duration utterly failed. The symptoms pointed to empyema, an exploratory incision was made and a serous purulent fluid escaped. The patient was ultimately cured by excision of the rib. The doctor is of the opinion that this is a most valuable remedy in serous pleurisy, which at the

same time affords a reliable means of determining the character of pleural effusions, that is, of differentiating the serous from sero-purulent or purulent pleurisy.

Antipyrine in pleuritic effusions was the subject of a communication by Clement.[18] His attention had been called to this subject 3 years ago and his observations were based upon some 20 cases. He notes the upper limit of dullness with lunar caustic and can thus detect the slightest variation in the amount of the fluid. Whether fever be present or not he at once administers antipyrine without any other medication whatever. In all cases there was on the following day, or at latest the day after, a marked reduction in the height to which the dullness reached. In some cases this dullness disappeared in 48 hours, in 2 or 3 the fluid was completely absorbed in 24 hours. In no case was the effect delayed beyond 4 days. The dose was one gramme every 4 hours. He thinks antipyrine has a specific action on nearly all inflamatory processes and it is to this that he attributes its beneficial effect in pleural effusion. This remedy failed when the effusion was purulent or bloody.

[References, when not otherwise dated, refer to 1891.]

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[2]Medical Bulletin, July; Le Progres Medicale, April 25; La Semaine Medicale, April 22.

[3]Boston Medical and Surgical Journal, Dec. 18, 1890.

[4]La Reforma Medica, Deutche Med. Wochenschrift, January 22.

[5]British Med. Journal, Dec. 27, 1890.

[6]Edinburgh Med. Journal, July.

[7]Progres Medicale, No. 5, Archives of Pediatrics, July and November.

[8]Medical Press and Circular, September; El Siglo Medico.

[9]Rivista Clinica, Sept., 1890; Deutche Med. Zeitung, Dec. 18, 1890; Sept., 1891.

[10]Archives of Pediatrics, November; Transactions American Pediatric Society, September.

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[12]Wiener Medischinische Presse, No. 20; Dietetic Gazette, October.

[13]British Med. Journal, Supplement, October 24.

[14]Therapeutische Monatschrifte, No. 7, 1890; British Med. Journal, Supplement, October 24.

[15]Pester Med-Chirurgische-Presse, No. 26; British Med. Journal, October 24; Medicine Moderne, August 6.

[16]La Medicine Moderne, June 18; British Med. Journal, October 24.

[17]Meditzenskoie Obozrenie, No. 15, 1891.

[18]Lyon Medicale, May 10; La Union Medicale, October 3; British Med. Journal, Supplement, May 16; University Med. Magazine, August.

TREATMENT OF PNEUMONIA.

By E. S. McKEE, M. D.

CINCINNATI.

AN analysis of 10,000 cases of pneumonia treated in the London hospital is the subject of an exhaustive paper by Fenwick.[1] He found that the quantity of albumen in the urine is of considerable prognostic value and those cases which commence with a severe gastric intestinal attack are twice as liable to end fatally as those which exhibit the more usual initial rigor. The mortality of the disease was shown to be directly proportionate to the severity of the symptomatic fever, and it is but natural to conclude that the presence of the high temperature tends to destroy the activity of some vital organ.

That the heart is the danger point in pneumonia all are agreed, but as to the mechanism of this danger all do not think the same. Dessau reviews the subject quite fully. As a means of dilating the cutaneous blood vessels and producing diaphoresis, Dessau suggests spirits of nitrous ether, Dovers' powder or spirits mindererus, also the warm bath, 95°, for sponging, 116° F. are recommended. Conjointly friction of the skin may be employed. He advises, as a further means of relieving the right heart the diversion of venous blood into the liver, a reservoir capable of holding a great quantity of this fluid. It is also suggested that an increase of blood to the liver will increase its functions, among which is the destruction of the poisonous principles of the blood. With this in view he suggests the use of calomel, aconite and veratrum viride.

In the heart failure so often the cause of death in pneumonia, Thomas[17] recommends $\frac{1}{25}$ gr. strychnine hypodermically every six hours. He believes it possible that strychnine acts directly on

the muscle of the right side of the heart and in the same manner as digitalis. A tolerance of the drug appears to exist in pneumonia and the dose must be large and frequent to secure decided results.

The treatment of pneumonia by large doses of digitalis has an ardent advocate in Petrescu.[3] The doses are simply enormous. He does not hesitate to give as much as 180 grains of the digitalis leaves in 24 hours. He prefers the infusion made with four parts of the digitalis leaves in 200 of water, adding 40 parts of syrup of orange peel, the dose then being a tablespoonful every half hour. He states that the dose is in general very well borne, and that he has never met with a single case of poisoning. He states that he has used the leaves obtained from all the best pharmacists in Europe with uniform results. It has its antiphlogestic action only in doses of 75–150 grains per diem, which can be continued 2–4 days according to the severity of the case. A decided and lasting diminution in the pulse rate is the result of these doses.

Fikel[4] has reported very brilliant results from the use of large doses of digitalis. Hershey[3] gives a hot infusion of digitalis in tablespoonful doses every hour together with 10 grains of calomel at the beginning. The hot infusion acts quickly on the cardiac muscles, forces the blood through affected area and thus to a marked degree overcomes the dyscrasia, is probably the rationale of the action of the drug. The use of large doses of calomel, by reducing the constituency of the blood, takes the place of the old time method of bleeding. Drugs intended to act quickly upon the circulation are more rapidly diffused if given hot. Favorable results with large doses of digitalis have been obtained in infants by Murphy.[16]

Chloral and digitalis are always given by Balfour.[6] The dose must vary with the age of the patient. Adults, 20 grs. chloral dissolved in a half ounce infusion of digitalis and subsequently half of this dose every hour until the temperature falls to normal, then give some approximate tonic.

The blood serum of immune animals as a curative agent in pneumonic septicæmia has been studied by G.& F. Klemperer.[18] They found that the pneumococcus when introduced into the body of an animal generates a poisonous substance which can be isolated and to which the name pneumotoxin has been given. This sets up a febrile condition which lasts several days, after which another substance is found to have been produced called anti-pneumotoxin and it is by means of this substance that it cures an attack of pneumonic septicæmia in other animals. Pneumonia in man and in rabbits is produced by the pneumococcus but the human body is much less susceptible than the rabbit. It was found that the serum taken from the pneumatic patients after the crisis, could cure pneumonian rabbits; moreover, pneumotoxin and anti-pneumotoxin were found to be present in human serum as in that taken from these rabbits. The crisis of pneumonia according to the authors takes place as soon as anti-pneumotoxin is produced in sufficient quantities to neutralize the pneumotoxin. Some attempts have been made to cure patients suffering with pneumonia with the help of anti-pneumotoxin, but further observations are necessary before results can be published.

Calomel, in the opinion of Smavosky,[7] is capable of jugulating or aborting fibrinous pneumonia. This therapeutic effect is not due to a direct action of the calomel on the pulmonary lesions, but a general antiseptic action of the medicine which destroys the toxic matter circulating through the blood and thus aids the resistance of the organism against the local morbid process. He employed the remedy after the method of Zacharnne.[8] In the two cases reported he gave five to six centigrammes of calomel per hour till the purgative effect was reached. In one patient this effect was obtained after the fifth, in the other the eleventh dose. In both cases this was followed by a lowering of the temperature and diminution of all other morbid symptoms, This amelioration of the symptoms was transformed directly into a crisis, without symptoms of collapse, and rapid recovery of the patient.

Smith[10] advocates blisters in the first stage and believes they act as suggested by Lauder Brunton,[11] "as a form of endermic administration of proteid matters altered in their passage from the vessels to the surface of the skin." He thinks

this proteid matter exercises a destructive action on the microbe of pneumonia and consequently cuts short the attack.

The pneumonia of infants should be treated, according to Hirst,[12] with stimulation, general, respiratory and cardiac, and the relief of internal congestion; ammonium carboñate, brandy and digitalis are the staples of medicinal treatment, the last being particularly important, and food is a very necessary aid. To relieve the congestion, place a cotton jacket over the chest and give mustard baths. Acetanilide has proven beneficial in the hands of Newhill,[13] who gave it to children in one grain doses every two or three hours, and thus secured prompt reduction of the temperature, moisture of the skin and the patient quieted.

The treatment of pneumonia in diabetes by Merklin.[14] This author regards pneumonia as one of the most dangerous complications of diabetes. It appears in this disease without any initial chill, pains or dyspnœa. He prescribes caffeine, one gramme per day hypodermically as a diuretic and heart tonic; two or three quarts of milk daily and one and a half grammes of sulphate of quinine, together with revulsion to the chest.

Exposure to the air is recommended by Coupland.[15] He thinks the pneumonic patient should be lightly covered or exposed to the air beneath a cradle covered by a sheet. The application of cold in the form of compresses or baths is of much value in his opinion.

Delirium in pneumonia is the subject treated by Robert.[9] He considers it one of the most interesting symptoms in pneumonia. When this condition is due to hyperæmia of the brain he treats it by ice to the head, bromide of potassium or sodium, chloral hydrate or paraldehyde and aconite. If necessary resort to the abstraction of blood, applying leeches behind the ears. When instead of hyperæmia there is congestion, it is necessary to employ some means to diminish the stasis so as to remove venous pressure. When delirium is of the anemic origin all remedies of neurasthenic action find place. Opium takes the lead with sulfonal and chloral hydrate unless contra-indicated by feebleness of the cardiac action. Delirium the result of infection, use the same hypnotics in association with salts of quinine, carbolic acid, creasote, etcetera.

[References, when not otherwise dated, refer to 1891.]

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[4] Wiener Medische Wochenschrift, June 13 and 20.

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[7] La Semaine Medicale, September 16; Medicina, August 23.

[8] Semaine Medicale, p. xvi.

[9] Lancet-Clinic, November 14; Revista de Cienias Medicas de Barcelona.

[10] Lancet, August 29.

[11] Practitioner, March, 1870.

[12] Annals of Gynecology and Pediatry, December, 1890.

[13] Virginia Medical Monthly, May.

[14] Gazetta Degli Ospidale, No. 56; Lancet-Clinic, October 31.

[15] British Medical Journal, Septemeer 26.

[16] Lancet-Clinic, June 13.

[17] T'Union Medicale, October 15; Il Morgarin, August 29.

[18] Berliner Klinische Wochenschrift, August 24 and 31; Therafeute Log, November; Edinburgh Medical Journal, La Medicine Moderne, October 28; Muenchner Medical Wochenschrift.

PROGRESS IN SURGERY.

EUROPHEN so well supplies the need of the surgeon for a complete substitute for iodoform that therapeutists are already classing it among the indispensable topical agents. According to Gilbert and Siebel europhen constitutes the best application we have yet had for burns and scalds, and is especially useful in combustion caused by corrosive substances. Gilbert found it of special value in scrofuloderma and ulcerative conditions. Chappell obtained excellent results from europhen in rhinitis, and Giles, after an extended trial of it in suppurative otitis, states that he is well pleased with the results obtained. He believes that "it is destined to replace iodoform and its congeners, not only in the treatment of non-specific pathological condi-

tions of the mucous surfaces, but as a topical application in all visible lesions of a specific character" (*N. E. Medical Monthly*, August, 1892). Shoemaker, in an able article in the *Medical Bulletin* of September, 1892, presents a series of cases covering the conditions for which iodoform has usually been employed, and in all of these the action of europhen was most gratifying. Becker employed it in cervical abcess with uninterrupted success, as also in several severe traumatic injuries (*N. Y. Medical Journal*, June 4, 1892). Dr. Allen found it of special value in chancre (*Medical Record*, July 23, 1892), and Eichler, (*Medical and Surgical Reporter*), gives like testimony of the value of europhen in chancroid, as also in specific eruptions. Fernandez employed europhen in keratitis, conjunctivitis, accidental traumatisms and operation-wounds, with results which decided him to call the attention of ophthalmologists to the remedy in an article in the *Cronica Med. Qui. de la Habana*, vol. 17, No. 34. Siebel confirms the researches on europhen as a dry antiseptic dressing, and presents (*Therap. Monats*), an interesting report upon its position towards the various bacteria. Waugh, (TIMES AND REGISTER, August 10, 1892), states that, "In true chancre, and all specific ulcers, europhen is superior to iodoform, and, probably, the mercurials.

TREATMENT OF CHOLERA BY STRYCHNINE.

By Surgeon-Lieut.-Colonel JOSHUA DUKE, I. M. S.

THE sub-cutaneous use of strychnia in the treatment of cholera, advocated by Dr. Ffrench-Mullen, has proved efficacious in several cases lately treated by me.

My own way of carrying out the treatment is briefly as follows, each case requiring modifications according to its merits.

A pill consisting of—Calomel gr. ii, Ext. cannabis indica gr. ½, was administered and repeated every second or third hour for three doses.

Should the pill be vomited, pure calomel was placed on the tongue.

For adults, liq. strychniæ P. B. m.v diluted with m.v of water, was then injected into each arm; after four or six hours' interval m.v were again injected, and repeated up to m.xx or m.xxv in twenty-four hours.

The success of the treatment was known by the return of the pulse, frequently in twelve hours, and of the voice.

During the next twenty-four hours ten to fifteen minims of liq. strychniæ were generally used; and repeated during the succeeding twenty-four hours if necessary.

To promote urinary secretion, say after eighteen to twenty-four hours, pilocarpine gr. ⅛th was injected; its effect, as mentioned by Dr. Ffrench-Mullen, being marvellous and rapid.

To check hiccough, nausea and sickness, antipyrine 5 grains, one or two doees acted well.

Fluids were freely allowed and good plain soup.

If severe cramps were very urgent as a symptom on admission, calomel was given as directed, and chloral hydrate gr. xii was sub-cutaneously injected (gr. ii in water m.x) into each limb; the strychnia being used after an interval with good results.—*Indian Med. Gazette.*

Dr. Leatherman (*Medical World*) says he has treated four cases of tuberculosis of the lungs, by enemas of goat's blood. Four ounces of the blood, defibrinated as quickly as possible after being drawn, were given by enema, high up in the bowel, that had been previously well flushed with warm water. The enemas were given every third day for a month. A hard rubber syringe was used, with soft rubber nozzle ten inches long.

The enemas were well retained, and rarely showed in the stools. The recuperation was "almost miraculous." The method is of interest, and should be tested further. Even as a means of supplying nutrition it may be of considerable value.

For acute coryza :

℞.—Tinct. aconiti, ... gtt. ¼-½
Tinct. belladonnæ, ... gtt. ½-j
Tinct. gelsemii, ... gtt. j

M. S. To be taken every hour; a saline cathartic to be given also.

—N. B. Bayley, *Medical World.*

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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NATIONAL QUARANTINE.

IN his address before the Tri-State Medical Society, Dr. Joseph Holt, of New Orleans, made a powerful argument in favor of a national quarantine. The exposition is so clear that one is tempted to ask why it should be deemed necessary to make it, and who there is who can doubt the wisdom of extending the national shield to protect the country from this most dangerous invader. A much needed warning against the present supineness is given by Dr. Holt in the following words:

"Our wisest medical observers, guided by historic experience, have proclaimed a timely warning, in this lull of peace to prepare for war when next summer's heats shall quicken into malignant activity the dormant forces of Asiatic cholera, now wintering in a thousand foci in the slums of Europe and in holds of filthy ships, to be set free upon the highways of traffic when the conditions of epidemic spread shall favor the invading march of its deadly battalions. The allied forces of yellow fever, whose history of conquest needs but to be mentioned to make us tremble, are at this moment hovering along the nearest tropical approaches of the line from San Diego to Baltimore, with destructive menace."

STRYCHNINE FOR SNAKE BITES.

IN the *Indian Medical Gazette* is recorded the case of a native boy, 12 years old, bitten by a cobra, who recovered after the injection of ⅔ grain of strychnine hypodermatically. The wound was also laid open by a crucial incision, washed with permanganate, and a tight bandage applied above the affected foot.

This case is important in that there was no doubt that the child was bitten, since the father saw the biting done, and it was undoubtedly done by a cobra, as the serpent was at once killed and brought to the doctor. The cobra was over three feet long, and in good condition; the poison glands well filled. The child was brought in for treatment half an hour after being bitten. The wound was on the great toe. Recoveries under such circumstances are almost unheard of; and the case is therefore a strong testimony to the value of strychnine.

THE Bureau of Hygiene and Sanitation of the World's Columbian Exposition, has issued a bulletin calling attention to the importance of the collective exhibit illustrative of the present condition of sanitary science. The classification includes gymnastics, alimentation, dwellings, hotels, baths and lavatories, shop and factory hygiene, and protective supervision. Organizations and individuals interested should communicate with the superintendent, Dr. F. W. Brewer. No pains should be spared to render this section so interesting, that general attention will be attracted, and public interest in the subject thereby stimulated.

Letters to the Editor.

TWO TYPICAL CASES OF EPISTAXIS TREATED BY THE "UMBRELLA FASHION."

A FEW days after reading No. 9, Vol. XXIV, of THE TIMES AND REGISTER, which contained an account of the "umbrella fashion" of treating epistaxis, I got an opportunity for testing it. I was invited to visit a large, corpulent lady, seventy-four years old, who was suddenly attacked with hemorrhage from the right nostril in consequence of making a hasty trip to the well for a bucket of water. The family stated that the blood had flowed very freely from one nostril, but before my arrival had almost entirely ceased. From appearances she had lost at least two or three pints of blood. Under the circumstances I did not think it expedient to use any mechanical means, but ordered ice to the head, styptics to the bleeding surfaces, a hot mustard foot bath, and left the patient in a comfortable and apparently safe condition. In about twenty-four hours afterwards I was recalled and found the blood flowing from her nose in a stream, having been bleeding more or less for several hours, with a loss of two or three quarts; as the most of it had been caught in a bowl the approximate amount was pretty correctly estimated. As there was no hemorrhagic diathesis, and the patient in good health, the cause was attributed to simple rupture of the capillaries of the nasal mucous membrane from over blood pressure, due to the fatigue in going down a hill, drawing a bucket of water, and returning hurriedly. The treatment this time was altogether local. After saturating a strip of old domestic, about an inch wide by seven or eight in length, in a solution of sulpho-carbolate of zinc, I placed my probe in the centre and pushed the strip well back into the pharynx, separating the ends and packing well between the extremities commencing in the curve, with carbolated cotton until the nostril was filled, fastening the ends to the upper lip with adhesive plasters. By the time this was completed all bleeding had ceased. Three days afterwards I removed the tampon and no hemorrhage has ensued since. If the weather had been hot, it might have been wise to have removed it sooner.

The second case was a German, fifty-eight years old, who had been suffering from leucocythæmia for years, and died a few days ago from asthenia. The conditions in this case were entirely opposite the former, as the nasal bleeding was due to anæmia. The family stated that he had bled a little occasionally for a week or more before the matter was made known to me, at which time it was assuming a serious aspect. In advance of each attack of bleeding a number of drops of serum would flow in rapid succession before any coloring matter was observed. In this case there was an hemorrhagic diathesis, bleeding sometimes from the calves of his legs sufficient to soil his clothing. The cause was perhaps due to a degenerated condition of the blood vessels, the consequence of anæmia. The treatment in this case was more complicated than the former, as I had to plug both nostrils, tying the extreme ends of the strips together. Three days afterwards I removed the tampons without any return of hemorrhage.

One great advantage about this mode of treatment is, a physician is not always provided with a Bellocq's canula, a flexible bougie or catheter when he comes in contact with these cases, but can always secure, within a few minutes, all that is needed in the "umbrella fashion" of treatment.

T. G. STEPHENS, M. D.

SYDNEY, IOWA.

CATCHING COLD AND ITS ACTION IN INTESTINAL AFFECTIONS.

BY exposure to a draught of air when one is overheated, by wet feet, or by sitting on a cold stone, a cold is contracted of which we cannot account to ourselves. The symptoms are a chilly feeling accompanied by aching of the muscular tissues of the body, succeeded by an inflammatory condition of the mucous membrane in some of the organs.

The tissues absorb from the blood and from the atmosphere cetain nutritive substances, and what of these are not utilized by the animal economy are excreted from the system by way of the mucous membranes and by way of the skin. The

dermal layers of the skin contain many of sebaceous hair follicles and perspiratory glands. The mucous membrane is constituted in the same manner.

As the skin forms the external covering of the body, it is the first to suffer the consequences of "catching cold." It is the first to feel the exposure to the cooling air when one is heated, and it is also the first to react against the operation of cooling off. The reaction occurs through the obstruction of the sweat glands and sebaceous follicles either by a tonic contraction or by a blocking up of their orifices. The skin being thus stopped in its excretory function, becomes, in a measure, dry, chaffy, and lacks its usual pliancy. As a consequence of this condition of the periphery some of the more vital internal organs become affected, causing pleurisy, pericarditis, etc. The share of excretory work left undone by the skin is thrown upon the mucous membrane to do, causing thereby an inflammation of it in some part of the respiratory or digestive organs. The genito-urinary organs even are not always exempt from the inflammation. Some of serous membranes are liable to be thus affected, causing coryza, pharyngitis, laryngitis, bronchitis, pneumonia, enteritis, etc.

What organs are especially liable to be affected depends upon external conditions, season of the year, etc., and, in certain persons, upon their diathesis. Thus, in winter colds frequently attack the respiratory, and in summer the digestive organs.

In my early practice I attended a six-weeks old infant having, on first visit, all the signs of a severe cold, sneezing, with some bronchial rales, but no vomit or diarrhœa. The child was very thinly clothed although two days previous to my visit the temperature of the summer weather had experienced a sudden and somewhat extreme fall. I caused a corn-meal poultice to be enveloped about its body, with the injunction to afterwards clothe it warmly and feed it nothing except the mother's milk. On my visit during the third day I found the child had diarrhœa. The mother admitted giving it about half a teaspoonful of onion gravy. The case rapidly developed into a case of cholera infantum and in a few hours death ensued. This is a typical case of a severe cold, inducing an inflammatory condition of the respiratory organs, turned into an attack on the digestive organs through improper feeding.

Lately, I attended a man of 80 years suffering with pain in the back, some fever, and considerable diarrhœa. He had exposed himself the previous morning to the chilly dews. My treatment induced profuse sweating, relieving him at once from the cramps. In a week he had wholly recovered.

By my theory I do not mean to say that all bowel complaints and diarrhœas are the result of cold. In treatment of colds those medicines inducing diaphoresis, and at times diuresis, should be used. In this way you will often effect a cure in a few hours, and by a subsequent attention to diet easily complete the good work. Dover's powder in proper doses answers well, also the fluid extract of jaborandi and if needs be, its extractive principle, pilocarpine, can be used hypodermically as it gives quick results. However, mild action is best, for a strong remedy is apt to weaken a patient. I have never received any benefit from the use of quinine. It is well to bathe the feet with water as hot as can be borne, taking at the same time a cup of hot ginger tea. The patient is cautioned to have plenty of warm covering at night and not to throw them off during sleep. For young children, aconite and veratrum diluted with water so that it can be given in teaspoonful doses.

Colds are so common that the text-books give them small space, and yet many physicians are ignorant of the action of cold upon the animal organism. The results of a neglected cold are so far reaching that I offer it as my excuse for the presentation of the topic.

GOULD SMITH, M. D.
TAYLORVILLE, ILL.

The Medical Digest.

Dr. G. W. Nafe reports (*Medical World*) several cases in which mal-presentations were corrected and delivery facilitated by manipulation while the patient was in the genu-pectoral position. Among the cases thus successfully treated were seven shoulder presentations,

two face, one occipito-posterior, and several prolapses of the funis. He also recommends this posture as affording great relief in the vomiting of latter months of pregnancy.

THERAPEUTIC NOTES.

TRANSLATED BY E. W. BING, M. D.
CHESTER, PA.

EXTRACTS from bulletin of the *Academy of Medicine of France*.

Cholera.—Dr. Peter developed the following theory. Microbic specificity is contradicted by observation. Spontaneity plays the principal rôle in the evolution of cholera, that explains why there is only the *one* cholera (in contra-distinction to other varieties, C. Nostras, C. Asiatic, C. Cholerine, etc.), which may take on different aspects, and degrees of gravity, dependent on the "soil" in which it develops.

The bacillus is not harmful in itself; but may become so by acquiring new properties, in the medium in which it vegetates, and by the fact of intrinsic modifications of this medium. It is *we* who produce in *ourselves*, cholera, dysentery, etc., by modification in our internal economy; it is *we*, *modified*, who give to an inoffensive bacillus, morbific qualities which it possesses henceforward, and can transmit to another person. The inoffensive bacillus will produce cholera, or dysentery, according as it comes from a subject attacked with either of these diseases. This brought the speaker to defend the theory that cholera is spontaneous, *autochthonous*, as well in Paris as in India, and to bring proofs in support of his assertions. In this connection, taking up the researches of Cunningham, at Calcutta, on the bacillus of Koch, and tending to refute the opinion that cholera is due in the first place to the introduction of the rod-shaped bacillus, into the organism, he put to himself the question, Is the bacillus the cause or consequence of the disease? and decided in favor of the opinion that it is the organism of the cholera patient which gives to the microbe its harmful properties. He deduced from this, that there is but a gradation between infantile cholera, and Asiatic cholera. Cholera is a "poisoning," which may be the result of spontaneous alteration of our food, or intestinal matters, or again from the introduction of mineral matter, or of toxines. We poison ourselves, and we poison our microbes, our normal parasites, which thus become in turn, poisonous.

Hence the possible transmissibility to another, of a disease, arising in us spontaneously, by our furnishing a material agent, for transporting a material affection. It is by the fact of the intestinal, alkaloidal poisoning of the cholera subject, that the bacterium coli changes in form and properties, becoming the curved and toxic bacillus. When the poisoning has been fatal, one does not find the virgulo bacillus in the dejections, death has occurred too quickly, the transformation of the bacterium has not taken place, etc.

—*Revue de Therap. Med. Chirurg.*

—

Hypodermic Injection of Digitalis in Cardiac Affections.—In several cases of cardiac disease (mitral stenosis; mitral insufficiency with narrowing, aortic insufficiency with narrowing, endocarditis, etc.), rebellious to all treatment, and where digitalis, by the mouth was powerless, Zienitz had recourse to digitalis by injection. He used, in this case, an infusion of digitalis, of which he injected two syringefuls a day, (rarely 3 syringefuls). The want of success by the mouth, is doubtless due to the fact that in the greater number of the non-compensatory affections of the heart, there exist concomitant lesions of the gastro-intestinal mucous membrane which hinder the absorption of the drug.

—*Le Courier Medical.*

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On Nervous Shock (Roger).—Shock is a morbid condition supervening on a strong excitation of the nervous system. It is characterized by a 'total' of inhibitory acts of which a single one, the arrest of exchanges between the blood and the tissues, seems to be constant and indispensable. Roger has seen it produced from the application of chloroform to the skin, immersions in hot or cold water, etc. In all cases the venous blood became red, respiration slowed, and the temperature fell sometimes several degrees. In consequence of the arrest of the exchanges,

the passage of the toxic substances of the blood into the tissues is impossible. In the subjects alcohol and opium produced no effect. During the state of shock, certain functions are, at the same time exalted. Muscular irritability sometimes becomes greater than normal. The phenomena, should be referred, not to weakness, but to excitation, to an inhibitory act.

—*Le Courier Medical.*

—

Treatment of Alopecia of Seborrhoeic Origin (Paschkiss).—In the frequent cases in which more or less abundant alopecia is produced by seborrhoea of the scalp, daily washings of the head with a solution, containing from 80 to 100 grammes of soap, and 20 grammes of bicarbonate of soda, to the litre (quart) of water, will at the end of about two weeks give remarkable results. Besides this a favorite preparation is :

Resorcine, 5 grammes . .	75 grs.
Alcohol, 150 grammes . .	5 oz.
Castor Oil, 2 grammes . .	30 grs.

When under this treatment the seborrhoea has completely disappeared, the washings must be used at longer intervals. At this time may be advantageously used the following tonic frictions containing quinine or tannin :

Sulph. quinine, ...	15 grains.
Alcohol, ...	2 oz.
Cologne water, ...	1 oz.

Mix, use externally.

Tannin, ...	15 to 75 grains.
Dissolve in alcohol, ...	q. s.
Add oil sweet almonds, . . .	2 oz.

M. external use.

—*Le Courier Medical.*

—

Salol in Acute and Chronic Cystitis.—Dr. B. Arnold draws attention to the excellent results obtained from salol in acute and chronic cystitis when given in an average dose of 3ss every three hours. He sums up the action of the drug as follows :

1. Salol renders alkaline urine, acid.
2. Deodorizes the urine, renders it limpid.
3. The muco-purulent deposit continuously diminishes, becomes more flocculent and, in most cases, entirely disappears.
4. The quantity of urine is increased.
5. Salol is well tolerated by the stomach, even when taken for a prolonged time, because it is only decomposed into phenol and salicylic acid, on reaching the intestine.
6. In cases where only very weak solutions can be used for lavage of the bladder, salol taken internally accomplishes its part in the disinfection.

The general rules for the treatment of cystitis must of course be attended to.

—*Le Courier Medical.*

—

Resorcine in Treatment of Tuberculous Ulcerations of the Larynx (Von Bymorsky).—This drug gives a better effect than lactic acid and is painless. In the early stages it is recommended to use derivatives externally, weak cocaine solutions, and spraying the throat with soda solutions. The food is liquid, and patients must abstain from speaking. When the active symptoms have subsided, daily applications of a solution of 50 to 80 per cent. of (medical) resorcine. There is no need to use cocaine. The suppuration and œdema disappear in a few days.—*Idem.*

Formulæ.—Chronic Rheumatism. (Whitla.)

Iodide of sodium, . .	8 grms.
Bicarbonate of sodium,	16 "
Bicarb. of potassium, .	30 "
Fowler's solution, . .	6 "
Comp. decoc. sarsap.,	600 "

Dessertspoonful after meals.

—*St. Louis Courier of Medicine.*

Anal pruritus.

Bi-chloride mercury, .	3 c grm.
Mur. ammonia, . .	12 "
Carbolic acid, ...	4 grms.
Glycerine, ...	60 "
Rose water, ...	115 "

Apply morning and night to the anal region. If the skin is thickened, apply once a "dabbing" with creasote. This is very painful for a short time. The general condition must be attended to.

—Bull, *generale de Therapeutiq.*

—

DOUBLE OVARIOTOMY ON A PREGNANT WOMAN : THE PREGNANCY GOING ON TO TERM.

[POLLAILLON.]

The operation was performed on a young woman in the third month of the pregnancy. As a rule this operation, under above conditions is followed by abortion. There have been numerous exceptions, however, in which after the removal of one ovary, the pregnancy has

run a normal course. But when the operation has been a double one, this result is very rare, on account of the serious interference with the uterine blood supply. In the present case the circulation was re-established by the vessels of the lower segment of the uterus.

The history of the case was as follows: At the age of 23 patient noticed an increase in size of abdomen, which progressively and rapidly augmented. Six years passed without much suffering from it. Menses irregular. Had had no pregnancy nor miscarriage previously. In the last three months of the past year (91) the patient began to feel some uneasiness, fatigue, general weakness and breathlessness. On December 28, she was siezed with violent pains in the hypogastrum and loins. The abdomen became tympanitic. Peritonitis was suspected and the woman was transported to the hospital de la Pitié.

There was found an ovarian cyst, fluctuating, very painful on pressure filling the abdomen and rising 4 or 5 fingers' breadth above the umbilicus. The most pain was in the left flank. Vaginal examination showed the neck soft, and a rounded, elastic tumor, lodged in the concavity of the sacrum, about the size of an orange, and which seemed to be the uterus. The patient had not menstruated for five months. This fact coinciding with the softness of the neck and enlargement of the uterus, interdicted the use of the sound.

The general state was very bad. Considerable emaciation, incessant pain, vomiting fever, indicated the necessity for ovariotomy, which was performed on January 12, 1892. Both ovaries were found to be cystic and both were removed. The sequelæ were all favorable and labor came on and terminated naturally. The cicatrix of the laparotomy remained solid and there was no tendency to hernia.

—*Archives de Tocologie et de Gynecologie.*

Injection for cystitis:

Iodoform, 1 gr.
Ether Sulph. } aa q. s.
Ol. Olvae }

Introduce the liquid into the bladder by means of Guyon's instillator, using 1 to 6 c. c. once a day, and repeat every two or three days.

Pains during micturition, or spontaneous pains disappear. The most amenable to treatment are the acute cases; the chronic cases being more obstinate.—*Gaz. de Gynecologic.*

Solution of ergotine for Hypodermic use. (Biedert.)

Ergotine, ... 1 gramme.
Distilled water, ... 5 "
Cryst. carbolic acid, . . . 1 centigram

This solution is non-irritant and also keeps well.—*Idem.*

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CÆSAREAN OPERATION, TERMINATING FAVORABLY FOR BOTH MOTHER AND CHILD.

[WINTERNITZ.]

The subject, 35 years, a crétin, height three feet five inches (about). Last menses, end of January, 1891. Entered the hospital the 26th of the following June. Pelvis rachitic. Ant. post. diameter 7 c. m; oblique, 8.9 c. m. Induction of labor was attempted, without success.

On October 19, the membranes ruptured without previous labor, the flow continued the following day, without pains. These finally appeared on the night of the 21st. The child's head rested solidly against the left iliac fossa. The neck was dilated sufficiently to allow the passage of a finger. The fœtal heartbeats were plainly heard. At 3.30 A. M. the Cæsarean operation was commenced. Chloroform and morphine were both used; the latter hypodermically. A living and vigorous child was extracted, weighing 3.87 grammes; length, 54 c. m. Dimensions of the head, 8.5; 10, 11.7; and 13 c. m. Lying in, normal. Temperature did not exceed 38°. Sutures removed on the tenth day; wound completely cicatrized.

Castration was practised at the same time. This operation was justified by the condition of the woman.

—*Rev. de Medicine-de Chir. et d' Obstetrique.*

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THE FUNCTIONS OF THE THYROID GLAND.

[SGOBBO AND LAMARI.]

The thyroid gland has among the carnivora a biological importance of the first degree. The life of the animals without it is impossible. It doubtless has a very important chemical action in molecular renewal, either in the progressive phase, by increasing the changes between the nutritive substances circulating with the blood, and among the cellular elements of the tissues; or, in the retrograde stages, by neutralizing the toxic products of organic reduction. There are

doubtless products, which, after the ablation of the thyroid gland, poison the blood, and hasten consecutively the nutrition of the nervous system and other tissues. According to this view, the syptoms seen after thyroidectomy should be regarded as dependent on toxæmia. The authors have shown that the tissues of animals which have been operated on, have not the power to poison healthy animals in which the thyroid is intact. But the toxæmia is aggravated under the influence of forced alimentation, because the principal poisonous substances then accumulated in the economy. Elevation of the surrounding temperature, on the contrary, lessens the toxæmia.

When the animals are weak or sick they are overcome more quickly by the toxic principle, developed after thyroidectomy on account of lessened resisting power. The best means of combating the symptoms following thyroidectomy in animals, is by transplanting into the peritoneum a thyroid gland. Thus the thyroid has an indubitable anti-toxic action. It remains to be discovered what the agents of auto-intoxication following thyroidectomy, consist of—what the nature of the thyroid secretion—and what particular reaction, determined in the economy, the chemical process of the secretion, which brings about the neutralization of the toxic principles.

—*La Medicine Moderne.*

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ON THE FUNCTIONS OF THE THYROID GLAND.

[Canizarro.]

In 1885 the author practiced thyroidectomy on dogs and cats with the results announced by Schiff and others. Then after having extirpated the thyroid in an animal, he has several times successfully grafted on, the thyroid of another animal of the same species. The transplanted gland performed the functions proper to it, without any difficulty accruing to the animal. The gland, however, lost by degrees, its colloid substance, and reverted to an embryonic condition. As regards animals in whom there was complete removal of the thyroid Canizzarro was able to save some of them from convulsions by giving large doses of bromide of potassium, and by forced alimentation. In 1884 Colzi succeeded in stopping the characteristic symptoms by the transfusion of blood, and thought that the thyroid served to eliminate a poison. The author has succeeded in preserving animals alive for some time after operation by injecting healthy blood. He obtained the same result in dogs with a concentrated solution prepared from the gland of different animals. A solution prepared from the blood of the animals operated on, was without result. Finally C. has shown that a solution made from the certical portion of the brain may or may not save the animal deprived of its thyroid body, according as the animal which furnished the solution, possessed or did not possess itself the thyroid gland. He draws the following conclusions:

1. The thyroid produces a substance necessary to the functions of the nervous system.

2. This substance should exist in the blood of all animals, and it is alone in insufficient quantity in animals which succumb after the extirpation of the gland.

3. All animals possess besides the thyroid gland other organs exercising the same function.

4. The product of the thyroid gland appears to exist in the blood and the gray substance although in small quantities.

5 Bromide of Potassium possesses an action over the ganglionic cells similar to that exerted by the active principle of the thyroid gland.—*La Med. Moderne.*

TREATMENT OF DOUBLE PNEUMONIA.

IN severe cases this morbid condition leaves us little time or opportunity before the excitus letalis transforms the vital spark. Our task is a double one, and I think the advice and treatment of Traube is the best guide we can accept for our direction in this serious trial. The first point in œdema pulmonum is to guard against the cessation or feebleness of the heart's action which would indicate stimulantia for our prescription which can be best provided for in the form of black coffee, alcohol, champagne, brandy, and strong wines; another stimulant might be more rapidly applied in the form of sub-cutaneous camphor injections.

℞.— Camph., 1.0 gram.;
Ol. oliv., 9.0.
Sig.—One to four minim injections, or about one to four decigrams.

If the morbid conditions have developed slowly and more time is allowed, digitalis in small doses, say half a gram divided into 150 may be given. There may be cases appear in which this treatment has little effect on the heart's action, especially in nephritic cases where the arteries are widely distended; camphor would be unsuited in such cases, as the pulse is already found to be strong and other therapeutics must be sought for. Foremost among these would be the application of a large vesicans not less than a book-leaf, quarto size (a small one has no effect) applied over the chest until large vesicles are found. Internally acetate of lead may be given with advantage as this will produce a contraction in the vessels, but it must be carefully administered.

℞.—Plumb. acetatis, 0.05 gram.;
Sacchari, 1.0 gram. M.
Sig.—Fiat. pulver.
Dentur tales doses decem.

One of these powders might be give every hour or four of them in rapid succession every half-hour. Blood-letting may be resorted to, but this is not to be accepted in a general course of treatment as bleeding is to be always received as a double-edged sword.—*Nothnagel.*

CONTINUED REMITTENT FEVER.

TO sum up the diagnostic features briefly, we have (*a*) as a rule a sudden invasion, though some cases present a stage of prodromes similar to cases of typhoid fever; (*b*) rapid and high rise of temperature, frequently reaching 103° or higher within the first three days, unless checked by antipyretics. These rises of temperature, instead of showing the morning decline and evening rise, are characterized by their very irregularity, assuming a remittent type with from one to three exacerbations, having no regular time for such variations, each case being a rule to itself; (*c*) no tympanites; (*d*) no abdominal tenderness in the iliac regions; (*e*) no borborygmus; (*f*) no diarrhœa nor hemorrhage, *per contra*, constipation and retracted abdominal walls; (*g*) no low muttering delirium, if any delirium at all it is generally active; (*h*) backache and headache generally severe; (*j*) frequently no anorexia; (*k*) the tongue never red, except when due to some gastric derangement; (*l*) the tongue broad and flabby, frequently marked with indentations of the teeth; (*m*) no tired feeling; (*n*) the attacks usually assuming the characteristics of intermittent fever, terminating by crisis, with profuse and exhausting sweats, when the temperature falls sometimes as low as 97°; (*o*) quinine appears to have no power to abbreviate the attacks. Now, these cannot be cases of typhoid fever; yet they frequently are so called, because it is thought to be necessary to acccount for the physician's inability to cure them. They are wanting in most, if not all, of the characteristics of that disease. In my opinion, they belong to the class of malarial fevers, but here, too, the diagnostic test fails. The rule is, that quinine will cure all classes of malarial fever. We are told to test these cases by means of 20 gr. doses of quinine; and, if that fails to abort the fever, when repeated night and morning for two days, then we have a case of typhoid fever to treat. This test has been applied and failed, and yet I am sure that I was not treating a case of typhoid fever. The most appropriate, seems to me, to be that used at the head of this paper, "Continued Remittent Fever." That would convey an idea corresponding with the clinical history of a large majority of these cases. There is possibly in them some localization of the effects of the malarial poison, the plasmodium malariæ, that causes the system to very slowly become cinchonized. In many of my cases, the long-continued use of quinine did not produce much deafness nor *tinnitus aurium*. I have used in my cases the sulphate, bi-sulphate, bromide and salicylate of quinine without observing any appreciable difference in the effects of either form. I have given Bartholow's mixture, the sulpho-carbolate of zinc, bichloride of mercury, eucalyptus, salicylate and sulphite of soda, and many other remedies, with no decided effect. In most cases the disease appeared to be self-limited, running a definite course, marked by its own irregularities in many

respects. This fever has been and is no respecter of age nor sex.

As shown in the history given in this paper, the infant, at the breast at six months, twelve months, and two years, has suffered. Adults, male and female, have not escaped. The mortality contrasts very favorably with that in many epidemics of typhoid fever. Post mortom examinations hence are rare. Another peculiarity of this fever is, the fact that *occasionally* a case of this type appears in a family in which there has been, or afterward developed, cases of undoubted typhoid fever. I saw two cases thus in one family, in which there was three (3) cases of *typhoid* fever in which there were all the diagnostic signs of that fever, one of them terminating fatally from hemorrhage, the other two recovering in spite of severe and exhausting losses of blood.—Happel, *Memphis Med. Monthly.*

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY—STATED MEETING OCT. 21, 1892.

HENRY LIND TAYLOR, M. D. *Chairman.*

PSEUDO-HYPERTROPHIC PARALYSIS.

DR. L. W. HUBBARD presented a case of pseudo-hypertrophic paralysis, which, although not exactly orthopædic, might not be entirely without interest in connection with the paper of the evening. It was also more than usually interesting, as the condition is ordinarily not seen until a later stage. The boy had probably had the present trouble, since he was five or six years old. He did not begin to walk until he had reached the age of two-and-a-half years, although all the other children in the family began walking at thirteen months. His general health has been quite good, but the parents noticed that he could not run around. At present he stands in a position of lordosis, with his feet well apart; there is slight ankle clonus, and absence of the patellar reflexes; muscular weakness is noticeable in the anterior part of the thigh. So far, the electrical reactions are negative. When he runs, he throws himself from side to side.

Dr. N. M. Shaffer said he had examned the case when it first applied for treatment at the Orthopædic Diepensary, and at that time, he made a diagnosis, by exclusion, of pseudo-hypertrophic paralysis, and Dr. M. A. Starr, who saw the case in consultation, also considered it to be in the atrophic stage of this disease. The speaker said he could distinctly recall having seen two or three such instances, where all the signs of the hypertrophic stage were subsequently developed; in one family, three children were all affected in the same way, but careful inquiry failed to elicit any evidence of hereditary influence.

Dr. A. B. Judson had observed cases in two families; in one, two brothers, and in the other, a brother and sister were affected. These and similar observations by Dr. Poore, and others, indicated that heredity is to be considered in the interesting, but still unanswered, question of etiology. He recalled an incipient case, in which a previous diagnosis of Pott's disease had been based on the peculiarity of gait, and an apparent spinal disability in rising from the recumbent position.

The chairman had known of a number of instances in which several members of one family had been affected in this way, and he thought it was common to find that they were usually late in learning to walk. He had nothing new to offer in regard to the etiology.

RACHITIC PSEUDO-PARALYSIS AND ITS TREATMENT,

was the title of a paper read by Dr. S. Ketch.

The author dwelt particularly on the importance of recognizing this condition, and gave its differential points, as distinguished from infantile paralysis, and the paraplegia of Pott's disease, with which it was most frequently confounded. He mentioned many other conditions which this condition resembled, and which it had been mistaken for, sush as spastic paralysis, post-diphtheritic paralysis, and even pseudo-hypertrophic paralysis. The clinical features were given, and corroborated those already described in Dr. H. W. Berg's paper, read before the section some years ago, and which the author thought had not been sufficiently appreciated by the general practitioner. The question of the occurrence of deformity

with this pseudo palsy was brought out. The author thought that in many cases, there was no deformity, as the children had never walked, and the superincumbent weight had not acted as a factor in the production of bow-legs, and knock knee. He had observed cases, however, that had deformity present. Some of these were probably cases of "foetal rachitis," and some, where the muscular condition came on after the child had already walked.

As to treatment, he advised, primarily, regulation of the diet, baths, and general hygiene. Medicinally, stress was placed on the use of phosphorus. Locally, electricity and massage, and inunctions with cod liver oil were recommended. The question of the use of "braces" was gone into thoroughly, the author being of the opinion, that their use is unjustifiable, while the muscular weakness remains, and prefers to wait until a later period, should deformity be present, when it can be remedied either by mechanical or operative means.

DISCUSSION.

Dr. Shaffer said that quite recently he had seen a case of rachitic kyphosis, which had been referred to him by an eminent medical practitioner, on the supposition that it was a case of Pott's disease, and not long ago, a case of rachitic paralysis had been sent to him with a diagnosis of double hip-joint disease. He would only add to the points in differential diagnosis, so well laid down, that the hyperæsthetic stage of true poliomyelitis anterior, is very likely the tender condition of the muscles which we find in rachitic paralysis. He had seen, in the course of a few weeks, five or six cases of poliomyelitis anterior, in the very early stage, and in two or three of them, this hyperæsthetic condition was present, and closely simulated pseudo-rachitic paralysis. One without much experience, might very readily mistake the tender stage of the rachitic condition for the hyperæsthetic stage of infantile paralysis. The differential diagnosis between the rachitic curve of the spine, and the curve of Pott's disease, is readily made by the ease with which the spine can be made to describe the normal motion, and also, by the diminution or disappearance of the kyphos by placing the child in the recumbent position. Still, it must be remembered that rachitic curves do show some spinal rigidity on attempting to hyper-extend the spine. The importance of this subject to the general practitioner is well shown by the case of a little girl in St. Luke's hospital, in which flexion and extension of the thighs were limited, as was also, inward rotation during flexion. The child complained of pain, and her general condition closely simulated the first stage of hip joint disease. This pseudo-rachitic muscular condition is not accompanied, in the majority of cases, by deformity, but the symptoms precede the stage of deformity. As soon as the muscular tenderness begins to subside, these children get on their feet, and then the influence of the superincumbent weight of the body, comes into play. He was glad that the author had emphasized Dr. Berg's comments on this subject.

Dr. Judson referred to the peculiar locomotion of these patients. Such a child would sit on the floor with his feet before him, and by raising first on one, and then on the other ischiatic tuberosity, and by the help of his hands placed on the floor would move about with considerable rapidity, but in a remarkably grotesque manner. The activity shown in this way would indicate that tenderness of the bones is not an important, and certainly not a constant, feature. It is probable that such a child postpones walking because he is disinclined to trust his corporal weight on the softened bones of the lower extremities; it is another instance of the necessity of taking the weight of the body into account in the observation and treatment of orthopædic patients. He agreed with Dr. Ketch in condemning all attempts to coax or compel such a child to walk before he was ready to do so of his own accord.

Dr. Joseph Collins said that as a neurologist, he had been much interested in the topic for discussion, and he would like to ask for further information in regard to the etiology and pathology. He would also like to know why the last case reported in the paper might not be considered a mild form of multiple neuritis, and also, why we could not call most of these cases instances of auto-toxæmia, manifesting itself through t

sensory and motor nerves. The clinical history, under such circumstances, would be such as had just been given, and the treatment exactly that ordinarily prescribed by the neurologist. These are the cases which the neurologist would term "the pareses of toxæmia." Admitting the toxæmia, the treatment should be by elimination, by checking the formation of leucomaines or ferments, and by keeping the child entirely at rest.

Dr. W. L. Carr said that at the time Dr. Berg's paper was presented to the Section, in 1889, he was preparing an article for the American Pediatric Society, on "Some Manifestations of Rachitis not Associated with Severe Bone Changes." From a considerable experience among children, he could say, that rachitic muscular weakness is almost always without severe bone changes. Recently attention has been directed to the association of scurvy with rachitis, and in this country, Dr. Northrup has reported a number of such cases. In the case described by the author, and which he saw in consultation, the excessive epiphyseal tenderness and general hyperæsthesia, would seem to indicate the association of scurvy with the rachitic condition described. Both rachitis and scurvy are conditions of malnutrition, the latter being a more aggravated form. Both are amenable to very much the same treatment, viz.: regulation of the diet, and the administration of phosphates, and cod-liver oil. When the tenderness is excessive, and accompanied by swelling around the joints, he was cautious about making a diagnosis until he had inquired sufficiently into the history, to enable him to positively exclude scurvy. Where the scorbutic tendency was present, the use of fruit juices, and of fresh beef is indicated, in addition to the treatment already mentioned. The dietetic management of rachitic cases in children is often quite difficult, owing to the existence of an intestinal catarrh, which prevents the ready absorption of cod-liver oil; hence, an excellent preparatory treatment is to administer an alkali, and sometimes a cathartic. These children have often been fed largely on starches and sugars, and dislike milk, and under these circumstances the change to a proper milk diet should be made very gradually, otherwise an attack of acute indigestion will be the result It is quite possible that a poisoning of the system may be present, on account of the fat and sugar upon which most of these children have been fed, this kind of food making fat rather than blood; but the disease itself shows no evidence of a condition of self-poisoning.

Dr. Halsted Myers described a case of marked rachitis occurring in his service at St. Luke's Hospital, in which the kyphosis was so rigid that Pott's disease could not be excluded until after three weeks of observation; the pseudo-paraplegia had lasted two years, a longer duration than he had ever seen before. The power was gradually improving, though the child was still unable to stand; pseudo-hypertrophic paralysis and poliomyelitis had been excluded.

Dr. Royal Whitman asked as to the intellectual capacity of the child. Cases of delayed cerebral development, or semi-idiotic children were often brought for examination, because they were unable to stand. These patients often suffered from rachitis, and it was occasionally difficult to differentiate between the want of power or disinclination to stand the effect of disease, and that resulting from impairment of the cerebral centres.

Dr. Myers replied, that in his case, the child possessed average intelligence.

Dr. R. H. Sayre said the symptoms of rachitic paralysis were often mistaken for Pott's disease, and he had frequently noticed more resistant curves of the spine than Dr. Shaffer's remarks would lead us to believe occurred, so that, in a number of these cases, rest in the horizontal position for a long time, was requisite, before the curve of the spine disappeared. While the diagnosis rests upon the history of the case, and its general course, there was a rachitic state present, long before the development of these bone deformities. The pain and tenderness are a benefit, in so far as they prevent the child from walking too soon, and, therefore save it from greater deformity.

Dr. H. W. Berg said that the important thing to remember about the pseudo-paralysis of rachitis, was that it was really not a paralysis; this is the first

step in the successful treatment of these cases. Regarding the different diagnosis between rachitis and multiple neuritis, he said that the one is an organic disease, resulting in organic muscular changes, while the other, is a functional disease. The organic changes resulting from a multiple neuritis would very soon give rise to unmistakable symptoms, while the pseudo-paralysis of rachitis never resulted in any change, either in the muscles or in the nerves.

Dr. Ketch, in closing the discussion, said that his object in writing the paper, was to emphasize the clinical features already given in the paper by Dr. Berg, and to bring the differential points especially to the attention of the general practitioner. He had no new facts to present, except the question of the presence or absence of deformity in these cases and the discussion had shown a remarkable unanimity of opinion regarding the absence of deformity. Personally, he thought he had seen quite a number of cases where muscular weakness and deformity were both present, and also that he had seen many cases where this trouble still persisted at the age of three or four years, and was associated with some deformity. It was not at all unlikely, that some of these were instances of what is called "foetal rachitis." In his paper, read before the American Orthopedic Association, on "Posterior Rachitic Curvature," he had stated positively, that there was no reason why rachitis and caries of the spine should not co-exist, and he was sure that he had seen such a condition. This might explain the case reported by Dr. Myers. It must not be forgotten that in many of these cases of rachitic paralysis, the children have walked for some time before the muscular weakness develops, and that in these cases, when this condition is first noticed, the mother describes it, by saying that the child "has suddenly been taken off its legs."

A MODIFICATION OF THOMAS' WRENCH.

Dr. Myers showed a modification of Thomas' wrench, much more simple, and costing about one-fourth as much as the original. The Thomas wrench could overcome an equinus, the rotation on the antero-posterior axis, and the adduction of the foot, as a whole, but it did not seem well designed to correct the adduction of the fore-foot, in relation to the heel, and to do this, Dr. Myers had attached to the distal jaw of the wrench, another handle bar, so that he had two levers of the second class, having a common fulcrum. This fulcrum was placed over, or just behind the cuboid, and the two other jaws clamped side by side on the inside of the foot. When the handles were separated, the jaws also separated, so that the tissues on the inside of the foot were stretched. The outer border of the foot was not crushed inward between two fixed points of resistance, which would be very undesirable.

ANÆSTHESIA IN THE LIGHT OF RECENT PHYSIOLOGICAL AND CHEMICAL RESEARCH.

IN what way do accidents, *i. e.*, departures from the normal procession of events, under chloroform occur during and after surgical operations? The old theory that syncope is a secondary effect of failure of respiration will have to give place to belief that this failure is due to primary cardiac asthenia, to the effect of chloroform on the heart muscle. Accidents after operation are attributable to effects incidental to the same, as hæmmorrhage, shock, direct effect of the anæsthetic itself.

From the experiments of Shore and Gaskell it seems that the two vulnerable points in chloroform toxæmia are the respiratory centre and the heart itself. Wood and Hare's experiments lend confirmation to these views by showing that vagal action has virtually little effect in causing death by chloroform, except when the patient is imperfectly under its influence. It appears from Prof. MacWilliam's experiments that acute dilatation of the heart occurs as the direct effect of chloroform upon the heart muscle. The immense clinical importance of this fact is, that although under ordinary conditions the heart muscle will, when the chloroform is withdrawn, contract and eventually regain its normal resiliency, yet this is not always the case; a point exists which appears to be attained at a different time by different hearts, and probably determinable by the vigor or want of tone of

the heart muscle when the chloroform is inhaled, beyond which the heart loses its power of recovery, and death must result. Consistently with our present knowledge of the physiology of the subject it would seem that many of the deaths under chloroform, when the patient exhibits no failure of respiration are due to the enfeebled state of the heart.

The deaths occurring during operations are commonly set down to shock. Here, experiment upon the lower animals gives a result contradictory to our clinical experience. The results of the Hyderabad Commission are worth quoting:—"In order to test the alleged danger from shock during chloroform administration the Committee performed a large number of those operations which are reputed to be particularly dangerous in this connection, such as the extractions of teeth, avulsion of nails, section of muscles of the eye, snipping of the skin of the anus, etc., but in no case in any stage of anaesthesia was there anything even suggestive of the failure of the heart's action."

This statement is easily accepted by those who are familiar with physiological work. But I can hardly suppose that anyone who has enjoyed an extensive hospital experience would consider that what is above stated—and truly—of the lower animals applies in the same degree to human beings. Nor is it at all remarkable that animals accustomed through the very stress of their lives to severe exercise—running, jumping, fighting, etc.—should exhibit less reaction to sudden shock than man; and, again, the absolute dependence of their life upon the due performance of respiration explains the well-recognized frequency with which dogs in particular die when there is any interference with their respiration. Respiratory failure under complete anaesthesia is as real a danger in the lower animals as in man.

What has recent research taught concerning chloroform? I think we may summarize it thus:

1. Chloroform in anaesthetic doses, when no asphyxial conditions are present, exerts an effect directly upon the heart muscle, leading by its weakening to a simultaneous cessation of the action of the heart and respiration.

2. In cases when respiration persists after apparently the heart has ceased to beat, when artificial respiration fails to restore the natural respiration, death is due to the direct toxic action of the chloroform upon the heart.

3. That the fall of blood pressure is probably due primarily to the direct action of chloroform upon the heart muscle.

4. That, even when slight blood pressure fall may be protective, it reveals a condition of the circulatory system, itself a source of peril.

5. That impurities in the chloroform have some, but what effect we do not at present know.

6. That the elimination of these impurities will not necessarily remove the perils of chloroform.

7. That the experiments upon the lower animals as regards "shock" are not a reliable guide taken by themselves in studying "shock" in human beings.

—Brixton, *Brit. Med. Jour.*

A Successful Method of Avoidiag Fatalities Under Anæsthetics.—One that has proved very satisfactory in producing regular inspiration and expiration, and in resuscitating all of the cases (about twelve in all) in which dangerous symptoms were observed, is that originating with Dr. H. A. Kelly, it is as follows: As soon as it is seen that a patient has stopped breathing and the radial pulse is either feeble, intermittent, or entirely absent, and the pupils dilated, the operation is instantly suspended, and one of the assistants jumps upon the table and stands between the patient's legs, sometimes near the knees, sometimes with his body between her(or his)feet,and with his arms under the knees elevates the body from the table so that the buttocks are raised twelve or fifteen inches above its plane, while the upper part of the back and the scapular region still rest upon the surface of the table. The head is allowed to drop slightly over the edge of the table until the chin and throat are almost on a line. The surgeon takes his position at the head of the table. The patient's head rests in the hollow of his thigh and is supported there by this and kept from dropping into a position of too great extension. The whole of the body is bared from hips to shoulders, and the surgeon proceeds to produce regular inspiration

and expiration by first grasping the patient with both hands under and behind the lower thoracic (inferior costal) region. The lower chest is then pulled forward. This produces at once a suction of air into the chest. After waiting two or three seconds the movement is reversed. The surgeon uses both hands to compress the lower thoracic region and force the chest back towards the table. In addition to the advantage that this carries air into the chest and forces it out, producing rhythmic respiration under control of the surgeon, the blood in the body is carried by the posture to the thoracic and cerebral regions and currents are started by the respiratory effort to and from the heart, which cannot fail to have a value in stimulating regular action. After one, two, or three minutes of this exercise the patient usually begins to make voluntary efforts at respiration, when the surgeon carefully times his own movements to act in a supplementary manner.

THE USE OE NITROUS OXIDE IN MINOR SURGERY, AND ITS COMBINATION WITH ETHER.

DR. RUMBOLL, four years ago, whilst present with a patient at a dentist's, was surprised to see the amount of work which could be done by a dextrous operator whilst the subject was under nitrous oxide. At that time Dr. Rumboll had a patient with a tuberculous nodule in the neck over the sterno-mastoid. Knowing that she had arranged with a dentist to extract a decayed tooth under gas, he arranged to remove the nodule at the same time. Having everything ready—chloroform and ether in reserve, in case they were required—the dentist administered the gas and gave the signal to commence. Dr. Rumboll made an incision through the skin, removed the nodule, and inserted two sutures. The dentist then removed the face piece, extracted the tooth, and in about ten seconds the patient recovered consciousness. She had felt nothing, and expressed surprise at the operation being completed. Since then Dr. Rumboll had used nitrous oxide largely for the minor operations, so frequently cropping up in general practice, such as :

1. Opening a whitlow.
2. Opening abscesses in various parts of the body.
3. Avulsion of ingrowing toenail.
4. Inserting sutures for cuts, the result of accidents.

Another interesting case was that of a man suffering from three large hæmorrhoids ; they were protruding beyond and tightly constricted by the sphincter ani, giving him intense pain. He refused to have them removed or take any anesthetic. He was finally persuaded to have nitrous oxide, which kept the patient in an unconscious state for nearly three minutes, whilst Dr. Rumboll dilated the external and internal sphincter muscles completely with the thumbs, and pressed up the piles well beyond the internal sphincter, where they remained. Another case was that of empyema in a very delicate young lady of 24, whose respiration was much embarrassed, so that Dr. Rumboll preferred not to give chloroform. Under gas the patient remained unconscious whilst an incision was made through the chest wall into the pleural cavity and two large drainage tubes introduced. The patient recovered consciousness immediately, and was much relieved by the operation. He had also used nitrous oxide in the excision of tonsils, but did not advise its use in that operation, as in some cases the jactitations produced by the gas might embarrass the operator.

The Administration of Nitrous Oxide.—In the administration of gas, to insure full and speedy anesthesia, attention to the following details was important :

1. The face-piece must be of such a size as to fit over the mouth and nose, so as to keep out all extraneous air, especially in a man with a heavy beard and moustache.

2. It was advisable to encourage the patient to take a few long inspirations and expirations before turning on the gas.

3. The gas was best turned on toward the end of a long expiration, as by so doing the patient drew in a large amount of gas, undiluted with air, during the next inspiration. If this precaution were not taken and air was inspired with the gas, struggling would almost certainly ensue, the patient would require a much

larger quantity of gas, and narcosis would not be so profound.

4. It would be found that the patient would go under better, and much more quickly, if the gas were given under pressure produced by pressing slightly on the distended gas bag.

The experience gained in a few cases would enable the practitioner to tell when to commence operating. When once experience was obtained the anesthesia might be almost indefinitely prolonged, by the occasional removal of the face-piece, thus allowing the patient a few inspirations of air, and reapplying so soon as symptoms of returning consciousness showed themselves.

Nitrous Oxide Followed by Ether.—Perhaps for the general practitioner, gas would be found most useful in combination with ether. He now always preceded the administration of ether by that of gas. Out of 400 cases, he had found that not 2 per cent. struggled, and in these he believed it was due to giving an insufficient quantity of gas. There was a total absence of excitement; gas being tasteless, the patient was spared the suffocating odor of ether. On an average, it took a few seconds over four minutes to produce complete insensibilty.

He believed that to precede the administration of ether by gas was much safer than to give ether alone, as all struggling was avoided; undoubtedly to patients suffering from a weak heart, the violent struggling when ether was being given alone must be a source of danger. From inquiries made of a large manufacturer of gas (basing the calculation on his estimate of eight gallons of gas being used to each case), the annual consumption showed that there were four million cases of gas administrations each year in the United Kingdom. This might be taken as a fair yearly average for the last ten years; during that time the deaths attributed to the employment of gas were five in number, *i. e.*, five deaths out of forty million cases; and it was doubtful whether any one of them was due absolutely to the effects of gas alone.

Description of Gas and Ether Apparatus—Mr. Rutterford had constructed for him an apparatus in which the valves were differently arranged to those in Clover's apparatus, and fitted more accurately. A small reservoir on the top contained the ether, which was turned on when required. The outside being made of glass, the administrator could see the quantity of ether being used and instead of turning the inhaler round to turn on the ether, as in Clover's, a small pointer only was turned through half a circle, from right to left. The inhalation was begun with the pointer at 0; when the patient was nearly under gas, the pointer was turned to 1, which indicated that he was inhaling 1 part of ether and three of gas. The pointer was then rapidly turned to No. 2, when the patient was then inhaling two parts of ether and two of gas. By this time he would be unconscious; the gas bag removed and the ether substituted.—*British Medical Journal.*

ADVICE to the gouty: Go up to Bedford Springs for a week's shooting, and drink Magnesia water.

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ORIGINAL ARTICLES: PAGE.
URETHRAL IRRITATION. By Mary Putnam Jacobi, M. D. 601
OBSTETRIC SURGERY, WITH THE REPORT OF A PORRO CASE. By Anna M. Fullerton, M.D. 605
NEW FORM OF A VALUABLE HEMATINIC. By W. H. Walling, M. D. 612

EDITORIAL:
THE PAN-AMERICAN MEDICAL CONGRESS 614

LETTERS TO THE EDITOR:
Melancholia Reaction. *S. V. Clevenger* 615

BOOK NOTICES:
A Manual of Clinical Ophthalmology. *Hansell* 616
The Physician's and Student's Ready Guide to Specific Medication. *Niederkern* 616
Hygienic Measures in Relation to Infectious Diseases. *Nuttall* 616
Manual of the Practice of Medicine. *Stevens* 616
Prescriptions and Favorite Formula from Authors, Professors and Practicing Physicians 616

NEWS: PAGE.
The Fifth Pure Food Exposition 617

THE MEDICAL DIGEST:
Biological Society of Paris and Ferran's Method of Inoculation Against Cholera (*Deutsche Medizinal-Zeitung*)—Intestinal Antisepsis (*Juettner*)—Flaming Surgical Wounds.—Surface Color and Contour and Visceral Lesions (*Manley*)—Prolapse of the Rectum and Treatment Therefor (*Manley*)—Note on Peroxide of Hydrogen in Diphtheria (*Richardson*)—Preliminary Note on the Treatment of Syphilis by Dog's Serum (*Cotterell*)—Diagnosis of Acute Anterior Poliomyelitis (*Church*)—Cordier thus Presents the Case for the Coeliotomists. (*Annals of Gyn. & Ped.*)—The Effect of Ergot on the Involution of the Uterus During the Lying-in Period (*Herman*)—The World do Move—Resorcin with Bismuth, for Asiatic Cholera—Insurance Against a Sudden Increase in the Family (*Med. Review*)—Dyspepsia (*Simon*) 619–624

NEWS AND MISCELLANY 624

NOTES AND ITEMS ..... iv. x

Original Articles.

URETHRAL IRRITATION.

By MARY PUTNAM JACOBI, M. D.

[Read before the Philadelphia County Medical Society, November 9, 1892.]

THE causes of vesical and urethral irritation in women are both numerous and diverse. Gynecologists constantly refer to the irritation which accompanies uterine lesions—either inflammations or displacements. Dr. Howard A. Kelly has called attention to the tenesmus and frequent micturition which may be excited by lesions of the ureters, and such tenesmus may, for a certain time, be the most salient symptom of a renal calculus. On the other hand, the distinguished Philadelphian gynecologist, Dr. Wm. Goodell, has truly said, that "a nervous bladder is one of the earliest symptoms of a nervous brain; for nervousness means a deficient control of the higher nerve centres over the lower ones; the vesical irritability indicates a lack of brain-control." The following case excellently illustrates this remark:

It was that of an unmarried woman, about twenty-five years old, of a highly nervous temperament. A year previous to consultation she had, together with a sister, opened an office for type-writing. The business responsibility was unfamiliar, the work often heavy, and the patient had become anxious, worried, and excited over it. She did not, however, complain of but one symptom, namely, a frequent vesical tenesmus, recurring night and day. The passage of urine was free, but followed by an unbearable distress, apparently situated in the neck of the bladder. The urine was entirely normal in every respect, free from albumin, sugar, oxalates, or other sediment, inorganic or organic. The urethra was normal, and the bladder could be explored by the sound without causing any pain. There was no uterine disease. I should add that there were no definite hysterical symptoms, unless the irritability of the bladder is reckoned as hysterical. The patient was entirely cured by local faradization—one electrode being placed over the lumbar spine, the other over the bladder. A few applications were first made at my office, and immediately followed by diminution in the irritability of the bladder, and in the tenesmus. Then the patient procured a faradic battery for herself, and applied the current for about twenty minutes every night. Relief was speedily obtained, and a complete cure effected in a few weeks.

My recollection of the details of this case is incomplete, as it was observed by me a good many years ago, and I have not full notes. If the frequent and spasmodic contraction of the bladder be due to an over-excitation of the nerve centres of the lumbar spinal cord, and if this over-excitation be due to loss of cerebral inhibition, it is difficult to understand why the local application of the stimulat-

ing form of the electric current should have had so positively curative an effect. The explanation may be approximately referred to the general action of faradic electricity on hysterical peripheric neuroses—action which may almost be called specific—since it is exerted with success in all three forms, namely, hysterical paralyses, hysterical cramps, and hysterical paræsthesias.

Another case was that of a markedly hysterical woman, aged fifty years, who had passed the menopause, but who was subject to profound analgesia of the lower extremities, so that a pin could be plunged into the flesh and buried to its head without causing the least pain. This patient was subject occasionally to acute attacks of vesical irritability, associated with great general nervousness and depression of spirits. Such an attack was promptly dissipated by the injection into the bladder of two grains of cocaine dissolved in an ounce of water.

A third case was chiefly remarkable for the long duration of the single symptom, for the limited extent of its casual lesion, and for the final success of the treatment. The patient was a West Indian creole lady, between fifty and sixty years old, a widow, who had never had any children, and had never suffered any uterine disease. She was remarkably short, had an old-standing lumbar scoliosis, and suffered often from the muscular pains of lithæmic indigestion. She consulted me for an annoying and constant sense of pressure at the neck of the bladder, or rather more externally, at the urethra, attended with a moderate frequency of micturition, but no alteration of the urine. Just before and after micturition the sense of pressure increased and became more painful. Fifteen years previous, to relieve this same symptom, the urethra had been forcibly dilated by Dr. Marion Sims, but the patient insisted that she had not been at all benefited by the operation.

No spasm and but little pain was caused by the introduction of the catheter; and dilatation of the urethra with an ordinary urethral speculum failed to reveal anything abnormal. I tried several plans of treatment upon the case, which were all quite unsuccessful, and the patient finally ceased attendance. About five years later, very much to my surprise, she returned with exactly the same complaint. On this occasion, thinking that this peculiar and limited morbid sensation might be a pure neurosis, I applied faradic electricity by means of a double electrode inserted into the urethra and just within the bladder. This treatment at once greatly relieved the patient, and the relief persisted for twenty-four hours, when the distress returned. Repetition of the local electrization had the same effect, and the patient was so much more improved by this treatment than by any other which had been tried, that she persisted in it for several weeks. By that time she considered herself very decidedly improved, but not yet well. I then had an endoscopic examination made, and it was found that the mucous membrane of the bladder immediately surrounding the urethral orifice was swollen into a ring. The surface of the ring was moderately reddened. It seemed as if this protruding localized hypertrophy of the vesical mucosa had formed during efforts at bladder expulsion made in former years against some obstruction—very possibly a spasmodic contraction of the neck of the bladder in consequence of a fissure. The faradic electricity had relieved by determining retraction of the submucous cellular tissue. It seemed probable that the local application of a strong astringent would effect a more permanent shrinkage of the swollen mucosa. Accordingly, applications were made of a solution of nitrate of silver—five grains to the ounce—by means of an instrument that permitted the application to be made exclusively to the affected locality. The result was immediately beneficial, and a few similar applications, made twice a week, succeeded in entirely curing this troublesome symptom, which had been annoying the patient for twenty years.

My fourth case seems to me of unusual interest, both on account of its medical history and of the physiological doctrine it illustrates. The patient is a woman thirty-five years of age, who for many years had been overworked and underpaid in responsible business employments. Eight years ago her health began to fail, and in particular she began to suffer from two symptoms—severe spasmodic dysmenorrhœa and a distressing, burning

sensation at the urethra. This was at first said to be constant, but inquiry showed that the patient suffered little from it while lying in bed, but intolerably if she attempted to walk, so that she soon became unable to walk but a block or two. She consulted a prominent gynecologist, who treated her locally for three months, and then advised her to enter the Woman's Hospital. She remained for some time in one service, and at length the surgeon declared he could do nothing more for her unless she would submit to the operation of an artificial vesico-vaginal fistula. Refusing this, she entered another service in the same hospital, and here Emmet's button-hole operation on the urethra was proposed and performed. The patient, however, did not benefit in the least from these various manipulations, but rather grew steadily worse. According to her statement the most careful exploration was repeatedly made for any pelvic lesion adjacent to the bladder which could explain the persistent distress, but nothing definite was ever found.

After ten months' residence at the hospital the patient left it, rather worse than when she entered. She then went to England and consulted Dr. Keith, who, after a careful examination, advised her to desist from all further treatment. She followed this advice, and attempted to resume work, but her strength continued to deteriorate, and she finally was compelled to give up her work again, and remained a wretched invalid.

When the patient consulted me she was a thin, pale, anæmic woman, quiet and rather slow of speech—rather unusually free from the excitability and mobility which so often characterizes hysterical patients. Examination of her blood found 70 per cent. of hæmoglobin, and 1,960,000 blood corpuscles to the cubic millimetre. There was a continuous venous hum at the jugular.

The patellar tendon reflexes were normal. The subjective symptoms were: A constant sense of fatigue, mental and physical, rendering all exertion impossible; this associated with a sense of mental confusion and imperfect memory; distress, rather than pain; in the back of the head; profuse sweating at night; tenderness on pressure at Charcot's point, but on the right side; the skin over the hypogastrium and thighs moderately hyperæsthetic to touch; and extremely so to faradic electricity. There was a constant burning pain at the urethra, not at all aggravated by micturition, but greatly by walking. A distance of one or two blocks could be traversed with comparative ease, but then the burning pain became intense; a bearing down sensation in hips and hypogastrium was added, and a heaviness extending down the thighs.

At menstruation the patient suffered intensely for several days, but during the pre-menstrual week she usually felt pretty well, at all events much better than at any other time. This fact contrasted emphatically with the pre-menstrual pains which almost invariably characterize ovarian disease. Again, micturition was neither painful nor frequent, and was unaccompanied by tenesmus. A local examination found the uterus perfectly healthy; nothing abnormal discoverable in the pelvis except tenderness upon pressure in the region of the left ovary. The latter, however, was not sufficiently accessible to be exactly defined.

The urethra remained deformed by the partial failure of the union attempted after the button-hole operation. A catheter passed into the bladder caused no pain until it reached the neck of the bladder, then a spasm occurred, moderate in intensity but causing great pain. The spasm was easily overcome, and within the bladder the instrument caused no pain. The urine was normal in every respect. The patient had discovered for herself that the ingestion of large quantities of hot water—increasing the quantity of urine—diminished somewhat the urethral paræsthesia. If for any reason the urine became scanty, the burning became intense. The negative result of the local examination was entirely in accordance with that of the repeated explorations which had already been made by distinguished surgeons. In view of it, and of all the circumstances of the case, I myself made the diagnosis of a severe cerebro-spinal neurasthenia, of which the urethral burning, the ovaralgia, and the dysmenorrhœa were concomitant symptoms. They were, so I argued, symptoms projected on the periphery from a brain so badly nourished as to be

the prey of sensory hallucinations, generated in its lower visceral centres. The history of the case seemed to indicate that local manipulation of the bladder tended to increase, rather than diminish, the subjective hyperæsthesia. The aggravation of the paræsthesia by walking, the relief afforded by recumbency, seemed to me to depend on the facile exhaustion of the centres in the lumbar cord, with their double relations to the innervation of locomotion, and to that of the pelvic viscera. It did not, as evidently had been supposed, argue a coarse lesion of these viscera, which might be aggravated by pressure; rather a vasomotor neurosis due to loss of spinal control when the lumbar cord centres became exhausted.

In a very large number of cases cerebro-spinal neurasthenias, with irritative symptoms, depend upon lithæmia, or, more precisely, upon defect in the hepatic digestion of albuminous foods.

Reasoning most plausibly, though from too few experimental data, Haig has argued that many irritative or explosive symptoms in lithæmic cases depend on a saturation of the nervous tissues with uric acid; that the nerve explosions of migraine, and also of epilepsy, are correlated with a uric acid wave, as uræmic eclampsia is believed to depend on the surcharge of the brain tissues with excrementitious substances.

Herter, of New York (*N. Y. Medical Journal*, September, 1892), in a recent essay, calls attention to the numerous putrefactive products of nitrogenous foods, which form in the intestine when digestion of such foods is imperfect. Estimating these putrefactive products by the ethereal sulphates which appear in the urine, Herter has studied their relation to epileptic attacks, and believes to have found some degree of correlation between the formation of such substances and the convulsive seizures, and at any rate an abnormal degree of intestinal putrefaction in epileptic neurotics. These recent researches tend to focus and accentuate the conviction which many observant physicians must have formed, that the irritative phenomena of neurasthenic conditions are probably traceable to the immediate action on nerve centres of toxic substances circulating in the blood.

It is known that the forms of neurasthenia which are characterized by mere simple debility, are often wonderfully benefitted by an excessive meat diet. This determines an excess of nitrogenous metabolism which, when well borne, is a most powerful stimulant to the nutritive processes of nerve centres. In irritative neurasthenias, however, the milk diet is often far better tolerated, and the explanation is probably to be found in the fact that on such diet the various perversions of nitrogenous metabolism are reduced to a minimum.

In the case in question I resolved to experiment with both diets, and began with the meat, intending to administer a pound and a half a day. However, in the first two days the patient only succeeded in taking three-quarters of a pound a day, and on the third came to me in a very curious condition. Her habitual air of quiet depression had changed to great restlessness. Her respirations were 28, somewhat panting; her pulse 120, feeble, the sphygmograph showing a marked respiratory curve. Her mouth was parched, she felt feverish, but, though she had continued to drink a great deal of hot water, the urine had become scanty and high-colored, and the urethral burning was intense. She had been unable to sleep the previous night, was nauseated, and had contracted an intense repugnance to even the thought of animal food. In spite of the restlessness the patient was drowsy. This condition, produced as promptly and distinctly as if in a laboratory experiment, suggested several explanations, and, unfortunately, there was no opportunity to analyze the urine in such a way as might aid in the choice between them. Thus there was the possibility of a uric acid saturation of the nerve centres, an improbable theory, as the symptoms were quite different from those habitually associated with uric acid excess or retention.

The drowsiness, especially, suggested that peptones, insufficiently modified in the liver, had passed almost unchanged into the circulation, as in Lauder Brunton's experiment.

From a third point of view, the imperfect digestion of the meat had resulted in abnormal putrefaction in the intestine with generation of toxic substances,

which, passing into the blood, had occasioned the entire cortége of pseudo-febrile symptoms. This, on the whole, seemed the most plausible hypothesis.

The most important practical fact was the great aggravation of the urethral burning or paræsthesia under these circumstances, which certainly tended to confirm my hypothesis of its origin in constitutional conditions. The diet was changed to one exclusively of milk, three quarts a day. Two days later the patient returned, seeming a different person. The restlessness, hurried respiration, and nausea were gone; the pulse dropped to eighty-four, the urethral burning and ovaralgia disappeared, the patient feeling for the time quite comfortable.

The case is still under observation and the symptoms oscillate, although with, on the whole, a steady improvement in the condition of the patient. She is kept in bed the greater part of the day, on a diet of milk, baked apples, and a little rice; takes a steam leg-bath followed by cold sponging, minute doses of iron with maltine. Sleep is greatly improved, the mental depression lessened, the urethral burning reduced to a minimum, only occasionally aggravated; such an aggravation occurred on a cold, damp day, but on the next, a bright and clear day, the patient again felt a great deal better. Nevertheless, she was suffering rather more than usual from the occipital pain. This latter was entirely dissipated by an application of static electricity below the occiput. The same application was then made along the spinal column, and although for two minutes the patient was greatly fatigued, she then experienced an agreeable warm glow and sensation of prickling all over her body; and coincidently, what degree of urethral distress and ovaralgia was for the moment persisting, entirely disappeared.

Throughout that day and the next these two symptoms remained entirely absent, but the occipital headache returned on the second day, to again disappear on the third.

The absence of the local pelvic lesions in this case might seem to render it inappropriate for presentation at this meeting. But I have thought it interesting because the existence of local symptoms seems to have been sufficient to convince so many distinguished physicians that such lesions must exist, even though they failed to discover them. Yet it is a general law for sensory symptoms that any one may be due to one of three conditions: There may be a structural lesion at the point to which the sensation is referred. There may be a lesion at a distant or adjacent point from which nerve irritation is irradiated to the point of sensation. Finally, there may be a functional disturbance of the brain nowise representing the part, which disturbance is expressed by the morbid sensation referred to the periphery. On this account there should not have been any difficulty in regarding this urethral symptom as an expression of central nervous disturbance, from the moment that careful examination had failed to detect any local lesion of the bladder, urethra, or adjacent pelvic organs. Yet the presumption in regard to such lesions was so great, that when they were not found, they were almost invented; and when prolonged surgical treatment only left the patient in a worse condition than at first, she was given up as incurable, because her parts refused to adjust themselves to a preconceived and erroneous theory.

OBSTETRIC SURGERY, WITH THE REPORT OF A PORRO CASE.

By ANNA M. FULLERTON, M. D.

[Read before the Philadelphia County Medical Society, November 9, 1892.]

THERE is no subject connected with the science of medicine of which the average general practitioner has probably so little knowledge as that of pelvimetry, and the many deviations from the normal condition of things pertaining either to the maternal or fetal economy which serve to render labor a pathological rather than a physiological process. The unquestioning relegation of childbirth to the field of nature by popular opinion curiously exercises its influence upon the professional mind; hence, we find that almost any physician dares to practise midwifery, although he may stand conscientiously aloof from the management of less critical conditions belonging to other specialties, as ophthalmology, otology, laryngology, or general surgery. In the face of these facts, it is not surprising that we should have

such statistics of maternal mortality as those reported by Dr. John Shaw, obstetric physician to the Northwest London Hospital, in a work written as late as 1890. "Insurance reports show," says Dr. Shaw, "that of all the deaths occurring in women between the ages of nineteen and twenty-nine, over 18 per cent. are due to puerperal causes, and of the deaths registered between the ages of twenty-nine and thirty-nine, over 13 per cent. arise from the same source; in other words, all the other diseases and accidents to which women are liable at the earlier age, are less than five times as fatal as childbearing, and, at the later period, when the activity of the function is waning, childbirth is still responsible for nearly a seventh of the total mortality arising from 'all the ills that flesh is heir to.' To these appalling numbers," he continues, "must be added the vast army whose lives are enfeebled, and whose usefulness is crippled by some malady dating from the period of maternity." The injunction laid by beneficial associations in this country upon the payment of "sick benefits" to their members when suffering from what they denominate "womb disease," shows that from a business point of view pelvic disorders are far too numerous to make any investment based upon the chances of their occurrence or cure a possible means of gain. Whatever the sum she may have paid into the society, or however ill she may be, a woman suffering from pelvic disorder can claim no aid. This fact points a moral in itself.

Nor is injury to the mother the only disastrous result of ignorance and negligence in the management of labor. Too often, alas! in the subsequent history of the child, should it survive, we find evidences of brain injury: a slow or deficient mental development, actual idiocy, or congenital paralysis—conditions more pitiful than death and more to be dreaded. In an article read before this Society by Dr. J. Madison Taylor last spring, entitled "An Inquiry into the Causes Producing Cerebral Injuries in the Newborn," we have the frequency of such sequelæ referred to as follows: "Those of us who see many cases of nervous disease constantly have our hearts cruelly pained by parents who present children of defective and irreparable minds and bodies whose hurt has come through the process of birth." With regard to his investigations Dr. Taylor states: Questions directed to men of large obstetric experience result in a pretty uniform statement that more harm is done to the cerebrum of the fetus by delays in the second stage of labor than by the use of instruments to expedite it. Neurologists also generally hold this view. In support of this statement he quotes from Dr. Abraham Jacobi and Dr. Egbert H. Grandin, of New York; Dr. Jaggard, of Chicago; Dr. Morton, of Ann Arbor; Dr. Barton Cooke Hirst; Dr. Wharton Sinkler, Dr. Joseph Price, and Edward P. Davis, of this city. Among those who believe that instrumental injuries exceed those resulting from prolonged labor he mentions Dr. William Goodell and Dr. George A. Rex, and expresses his own belief that instruments ignorantly and often unnecessarily employed are productive of serious consequences in a large proportion of cases. It is universally conceded that cases of congenital brain trouble do exist, and that the exciting cause may often be traced to an abnormal birth. The investigations of Sachs and Peterson, referred to by Dr. Taylor, show that in a table of 140 cases of paralyses, among 105 hemiplegias, 22 were found to be congenital; of 24 cases of diplegia, 20 were congenital; and so were 7, or possibly 8, of the 11 cases of paraplegia. Their table of causes in the congenital cases showed that in 33 per cent. there was some difficulty in labor—simple delay or instrumental delivery.

When we look into the causes of difficult or delayed labor, we find that, as a rule, it results from disproportion between the size of the child and the maternal passages, or from want of power on the part of the mother. The difficulties arising from malpresentations and other pathological conditions are closely associated with these.

A very much larger proportion of cases of difficult labor arise from pelvic abnormalities than is generally supposed. The lack of attention to the subject of pelvimetry in this country has led to the belief that American women are comparatively exempt from pelvic abnormalities. The graver grades of deformity are, to be sure,

seldom met with; thus, the osteomalacial pelvis is not known in this country. The contractions and deformities due to rickets, however, are not at all uncommon, especially among the colored population. Prof. Anna E. Broomall, whose obstetric experience is probably one of the largest in the country, considers the most common abnormalities, taking the population as a whole, to be as follows: Among American-born women, the simple flat pelvis of the first grade of contraction, the average shortening of the antero-posterior diameter of the inlet being but 1 cm. below normal. The next most frequent cause she attributes to exaggerated inclination of the pelvis. Among the colored race the generally contracted rachitic pelvis is the most common, and the generally contracted flat pelvis the next in frequency. Dr. Edward Reynolds, in his work on "Practical Midwifery," just issued, states that in a recent analysis of the percentage of contracted pelves among the native and foreign-born women of the out-patient department of the Boston Lying-in Hospital, it was found that two out of every hundred American born women showed some evidences of contraction, though it was usually slight; while among the foreign-born women of the clinic the proportion of deformity reached nearly 6 per cent. My own observations in connection with the maternity work of the Woman's Hospital vary somewhat from these figures, owing perhaps to the fact that we have in Philadelphia a larger proportion of foreigners than are found in the Eastern States. Among 1000 cases of labor of which I have had supervision since my connection with the Hospital, about 14 per cent. had contracted pelves. If we include among abnormal pelves those of faulty inclination the number reaches fully 20 per cent. Careful measurements are taken of all the cases confined in the maternity wards. The generally contracted pelves were thus found to almost double the number of simple flat pelves, owing to the large proportion of negroes and foreign-born patients treated. In the simple flat pelvis the conjugata vera ranged between 8 and 10 cm; in the generally contracted, between 6½ and 10 cm The average contraction is not of a high grade.

The diversified conditions to which the various species of the human race have been subjected during their development have served to produce peculiarities in structure which have come to be regarded as characteristic. In the most intellectual races the pelvis is found to be most fully developed in area—a difference which must in part be associated with the greater size of the childrens' heads. The development is greater in the Circassian race, and affects especially the transverse diameter, which is lengthened, and the sacro-vertebral angle thrown forward, owing, perhaps, to early burden-bearing, improper dress, and other vices of living. The simple flat pelvis thus results. In the more savage races, as Negroes, Hottentots, Bushmen, and Australian aborigines, not only is the size somewhat less, but the pelvic brim is more round because of the smallness of the relative transverse diameter, and thus shows a greater resemblance to the type of the monkey's pelvis, in which the antero-posterior diameter is greater than the transverse. The angle of the pelvic arch is also generally less. The comparative ease with which labor is accomplished among these nations, notwithstanding the smaller size of the pelvis, is due to relative smallness in size and greater compressibility of the fetal head. An exceedingly important factor in the labor is thus found to exist in the fetal head. In his "Descent of Man," Darwin tells us: "The belief that there exists in man some close relation between the size of the brain and the development of the intellectual faculties is supported by comparison of the skulls of savage and civilized races of ancient and modern people, and by the analogy of the whole vertebrate series." Dr. J. Barnard Davis has found by many careful measurements that the mean internal capacity of the skull in Europeans is 92.3 cubic inches; in Americans, 87.5 cubic inches; in Asiatics, 87.1 cubic inches; and in Australians, only 81.9 cubic inches. Prof. Broca found that the nineteenth-century skulls from graves in Paris were larger than those from vaults of the twelfth century, and that the increased size, as ascertained by measurements, was exclusively in the frontal part of the skull—the seat of the intellectual faculties. One element of difficulty in

labor, therefore, arises as the inevitable consequence of civilization, particularly when associated with the inactivity and luxurious habits of women of the higher classes—an undue development of the child, with increased ossification of the skull being the result of such habits. It is this resistance of the fetal head, which increases with the age of the mother, that produces a history of increasingly difficult labors in a parturient whose earlier labors may have been perfectly normal. Such a history should at once direct attention to the measurements of the pelvis.

Ahlfeld's rule of determining the duration of pregnancy by obtaining the long diameter of the fetal ovoid, by means of Baudelocque's callipers, one arm of the instrument resting just above the pubic symphysis, and the other over the fundus of the uterus, is that generally employed, especially as an aid to the determination of the period for the induction of premature labor. The measurement thus obtained is supposed to represent just one half the length of the child in the extended position. The stage of development of the child may thus be determined, and the probable size of the diameters of its head. This rule is of necessity inaccurate, as the size of the developing child varies considerably in different cases at the same stage of gestation. It serves, however, as a working basis for approximating the size of the fetal head. In the slighter grades of contraction, particularly in the simple flat pelvis, if the head be of normal size and compressibility, the labor may proceed according to the normal mechanism. If the size of the head be disproportionate to the grade of contraction of the pelvis, the mechanism in a flat pelvis is affected by the inability of the head to adapt itself to the inlet in the ordinary way, its efforts to engage in the transverse diameter, the extension of the head thus brought about by the action of the uterine forces combined with the resistance offered at the inlet, until the bi-temporal diameter, being brought into relation with the true conjugate, the head may clear the superior strait. The labor after this progresses rapidly as a rule, particularly in multiparæ, there being no obstruction in the canal. The main peculiarity in the mechanism lies in the long delay of the head at the pelvic brim. Another difficulty offered by this class of pelvis arises from the fixation of the posterior portion of the head upon the promontory: the action of the uterine forces are then brought to bear upon the anterior, freer portion of the head, causing it to dip down into the pelvis. The planes of the head thus lose their normal relation to the planes of the pelvis, and an exaggerated obliquity is produced, which is one of the most common causes of impaction of the head in the pelvis. This obliquity cannot be prevented from occurring, because the fault lies in the pelvis. An attempt may be made to correct it manually, and at times may be successful. More frequently this condition, when recognized, is itself an indication for early extraction, because if left to itself the obliquity will increase, and the condition become more unmanageable. It is in the abnormal relations of the head to the pelvis thus brought about that, I believe, the greatest danger arises from the misuse of forceps. When the blades of the forceps are applied obliquely or transversely on the child's head, instead of on the sides, an acute and unequally distributed pressure results, to which, doubtless, many cases of cerebral palsy are due. In the flat rhacitic pelvis the reduction in the antero-posterior diameter is greater, hence this type of pelvis is more difficult to manage than the simple flat. The nearer the period of puberty the disease has occurred the greater the deformity produced. There is nothing in the appearance of the patient to call attention to the existence of the simple flat pelvis, unless there be considerable reduction in the antero-posterior diameter, when the abdomen of the gravida will be pendulous, and there will be greater mobility of the uterus because of absence of fixation of the fetal head at the beginning of labor.

Too great inclination of the pelvis likewise presents an obstruction to the engagement of the presenting part by carrying it beyond the area of the superior strait. Exaggerated obliquity of the fetal head, together with other errors in presentation, position, and variety, are thus brought about. A tedious first stage of labor is the rule. Positional treatment will often enable this difficulty

to be overcome without further aid. The accoucheur may assist the engagement of the head by flexing strongly the spinal column upon the pelvis. Manual pressure above the symphysis pubis, by which the presenting part is carried backward and more directly over the inlet, is also often successful in overcoming the difficulty. In the equally contracted pelvis extreme flexion is essential to the engagement of the head, and an actual occipital presentation is thus brought about through long-continued compression. The labor goes on as in normal mechanism, except that there is delay, slow engagement, slow descent, and slow expulsion.

In the generally contracted flat pelvis the mechanism approaches that of the simple flat pelvis, but the labor is much prolonged. Engagement occurs in the transverse diameters.

The rate of maternal mortality in contracted pelves has been estimated at 5 per cent. and the fetal at 21 per cent. This probably represents the result when operative procedure is delayed.

The asymmetrical pelves of this country are the oblique ovate resulting from scoliosis, coxalgia, luxation of hip-joint, or other injuries serving to shorten one limb during the formative period of the pelvis. If the existing obliquity is but slight, the labor may not be affected, the only modification being its lengthening. In high grades of deformity, however, the prognosis is very grave—75 per cent. of the children being lost, according to one authority. The mortality of the mother is represented as about half this. If there be room enough in the pelvis, the induction of premature labor is indicated if the patient be seen in time. Thus, if the antero-posterior diameter of the inlet be 8 cm., labor may be induced about the eighth month. If the diameter is below this, abdominal delivery is indicated. In the management of labor the accoucheur must be observant of the earliest symptoms of exhaustion on the part of mother or child, and prompt in tendering the required assistance before it is too late.

Among the thousand cases of labor occurring in the service of the Woman's hospital in the past six years, 19 per cent. required operative interference at full term. There were 8 deaths among the women delivered—less than 1 per cent. All but two of these were due to constitutional disease complicating pregnancy. Two sudden deaths occurred—one from shock following rupture of the uterus in a neglected transverse presentation; the other from air in the heart after a delivery, complicated by the pressure of a large fibroid. The fetal mortality was $4\frac{3}{10}$ per cent. from all causes. In 40 cases in which contracted pelves existed, labor was induced prematurely without the loss of a single mother or child, and thus the complications which might have resulted at a full term were averted. Among the other operations performed were 79 forceps applications at the brim and in the upper portion of the pelvic canal, due to difficulty in descent of the head; 75 forceps applications at the floor of the pelvis for uterine inertia and rigidity of the soft tissues; 11 cases of podalic presentation required assistance in the delivery; and 4 craniotomies were performed, all on dead children. One Cesarean section, one Porro operation, and one symphyseotomy were also done. Inclusive of the induced labors, the percentage of deliveries requiring artificial aid was 23.

The obstetrical resources for overcoming the mechanical obstacles afforded by moderate degrees of contraction are the induction of premature labor, craniotomy, forceps, version and symphyseotomy, or pubeotomy. Undoubtedly the management, *par excellence*, of moderately contracted pelves is the induction of premature labor; but this necessitates a careful study of the patient's pelvis early in the pregnancy, in order that the time elected for the operation shall be most favorable to mother and child. The advantages of premature delivery to the mother are owing to the diminished head pressure, hence the rare occurence of lesions of the genital canal. The disfavor with which the induction of premature labor has been heretofore regarded has probably been due to the large maternal mortality which attended its earlier performance, and which resulted, doubtless, from the employment of intra-uterine manipulations for its accomplishment and lack of antisepsis. The large fetal mortality was due to insufficient knowl-

edge of the needs of the premature infant and lack of care in its nursing. Spiegelburg gives the maternal mortality as 18.8 per cent., and the fetal as 66 per cent. Among 30 cases in which I induced labor last year there was no maternal or fetal mortality. It is rarely necessary in this country to perform this operation before the thirty-fourth week for pelvic contraction. The only fair way of testing the value of induced labor is to compare the results of the latter operation with those of full term labors in the same patient. With this view Dohrn reported 19 cases, with 41 children at term, 37 of whom died. In 25 subsequent pregnancies in the same cases premature labor was induced, with 15 living children. Milne, in the *Edinburgh Medical Journal*, vol. xix, reports six women as giving birth at term to 12 children, of which 11 were dead. In the succeeding 38 pregnancies of the same patients premature labor was induced, and 35 children were born living.

The aid of the couveuse—or hatching-cradle for infants—was very appreciable in the management of the premature infants born in our Maternity; and when, as in France, the use of the apparatus becomes more general, the induction of premature labor will, I believe, stand in higher favor in our own country.

The performance of version and extraction in contracted pelves exposes both mother and child to perils of no insignificant character. Borinski, collecting the statistics of version from the Breslau clinic, reports 58 cases of version in ordinary flattened pelves, with the result that just one-half the children were born dead. Three of the mothers died from results connected with the operation. In speaking of the high forceps operation, Professor William T. Lusk refers to the collected cases reported by Dr. Harold Williams. Among 119 cases, of the mothers nearly 40 per cent., and of the children over 60 per cent., perished. "So long as the head does not engage at the brim," says Professor Lusk, "there is no rivalry between version and forceps. The latter should be placed under the ban as hardly less dangerous than the Cesarean section." Version, however, is not applicable to the generally contracted pelvis; hence, in the revival of symphyseotomy we hope to find a method of procedure which will solve the difficult problem of non-fixation of the head in just such cases, and entirely do away with the barbarous practice of craniotomy on a living child. The operation is still in its probation in this country, but the brilliant results attained in Europe, as reported by Dr. Robert P. Harris lead us to hope that we have in symphyseotomy an operation by which far less destruction to the maternal tissues shall result than can be claimed for either forceps or version, and by which, also, the injurious effects of pressure upon the fetal head may be averted.

From the histories of reported cases, the chief objection to this operation, which lies in the possibility of non-union of the divided symphysis, would seem to be removed. In the only case of which I have any practical knowledge—that performed by Professor Anna E. Broomall, on October 10th, in our Maternity—the union is apparently perfect. Hubert, in a recent article in the *Archives de Tocologie*, warns us against the separation of the pelvic symphysis in mothers who are too old.

In cases of absolute pelvic contraction, where the conjugata vera falls below 6½ cm., and in the deformed pelves in which there is extreme narrowing, delivery by abdominal section is indicated. The two forms of operation usually resorted to are the Sanger modification of the classical Cesarean section and the Porro-Müller amputation of the uterus. Two operations of this class have been performed in our Maternity wards during the past six years. The first was a Cesarean section performed by Dr. Anna E. Broomall on a patient with a generally contracted rachitic pelvis, the conjugata vera of which measured but 6½ cm., or a little over 2 inches. The patient's child-bearing history was as follows: Three children had been prematurely born, all of whom died. Her first labor at term was a forceps delivery; the second, a decapitation; the third, a craniotomy, the fourth, a forceps delivery, the child being lost; the fifth a Cesarean section. Both mother and child did well after the section.

The second case of abdominal delivery was one performed by myself a little

more than six weeks ago. The patient was a primipara, aged twenty-four years; four feet eleven inches in height; rachitic, with marked kypho-scoliosis. Due to an old unreduced dislocation of the left hip joint, there was ankylosis with marked lateral obliquity of the pelvis and a beak-shaped pubic symphysis. The conjugata vera was estimated at 7 cm. The patient was admitted to the Maternity wards of the hospital suffering with an acute bronchitis superimposed upon an attack of rheumatism. She was then in the latter part of the eighth month of pregnancy. When she had recovered from her illness, a consultation was held, and it was decided to deliver by abdominal section when the patient was nearer full term.

On September 25th I performed the operation, assisted by Dr. Broomall, several other physicians being present by invitation. The nature of the operation had been explained to the patient's friends as well as to herself, and it was left to them to decide as to whether the uterus should be removed or not after delivery. My own feeling was strongly in favor of the uterine amputation, as it seemed to me totally unnecessary to preserve the childbearing function in a woman incapable probably of bearing healthy children, and bearing them, at any rate, at such risk. The parties concerned agreed with me in the matter, and the Porro operation was done. The uterus was lifted out of the abdomen before the uterine incision was made, and the rubber cord applied, as usual, for the control of hemorrhage. Very little blood was lost. No fluid entered the peritoneal cavity. The child gasped as soon as delivered and was soon crying quite vigorously. The uterus contracted firmly as soon as emptied. Before the delivery of the child, hemorrhage was controlled by Dr. Broomall grasping her hands around the neck of the uterus; after the delivery the rubber cord which had been placed was tightened. The placenta was delivered and the uterus cut away, after the application of a wire ligature. The stump was secured in the lower angle of the abdominal wound. I strongly desired to follow the method suggested by Dr. Baer, of ligating the uterine arteries and dropping the stump, but not having the same familiarity with this method as with the original one of clamping it, I refrained from running any risk. The mother made an excellent recovery and is perfectly well to-day. The child, a girl, weighing six and a half pounds at birth, now weighs nearly nine pounds, and is in good condition. The operation was done about a week before full term.

I am indebted to Dr. Harris for some data concerning the Porro operation which I append to this paper.

"The Porro-Ceserean operation has been performed over four hundred times, since its introduction in 1876, sixteen years ago; and its fatality has gradually decreased up to the present time. If all of the cases were operated upon in good season, and by men of known skill, their fatality of result would no doubt be reduced to a very small percentage. As an evidence of this reduction, I have only to state that there were in the year 1888, 29 operations, with 16 deaths, or 55 per cent.; and in 1890, 45, with only 7 deaths, a mortality of $15\frac{5}{9}$ per cent.

"There are three modes of treating the stump, viz.: 1, the original one of clamping it and securing it in the lower angle of the abdominal wound; 2, of dropping in the stump, as in many cases of hysterectomy, after ligating the uterine arteries and suturing the peritoneum over the cut cervix; and, 3, of securing the stump prepared the same way, by stitching it into the lower angle of the wound, peritoneum to peritoneum. The original method has the least risk, particularly when the subject is not in labor, or has been for a very short time. Many women were lost in the early days of dropping in the stump, as many as thirteen having died out of the first eighteen; but in the perfecting of the method, seventeen have been saved out of twenty, a mortality of fifteen per cent. This is the ideal operation with several skillful men who have had very good results, as it leaves the woman with a free abdominal wall and abundant space for bladder expansion after her recovery.

"The Porro operations of our own country have been largely confined to cases of obstruction by tumors, as operators have usually preferred the improved Cesarean section in those of pelvic deformity for two reasons: 1, the fatality

has been much less here; and, 2, most all of the patients are married women, and operators do not think proper to destroy their internal organs of generation. In the last six years there have been eighteen Porro operations with twelve recoveries in the United States (against sixty-three improved Cesarean operations with forty-three recoveries), one only having died out of the last twelve, and this woman had been seven days in labor, and had a placenta prævia. Of the last twelve Porro cases, two died; one was in a favorable condition prior to the operation, and the other was already septic. Both operations appear to be reaching a much lower measure of fatality, their result depending more upon the condition of the woman at the time of the operation, than on the choice of method. In European maternities in a large number of operations, that of Sänger has the advantage in their final results."

A NEW FORM OF A VALUABLE HEMATINIC.

By W. H. WALLING, M. D.
PHILADELPHIA.

IN THE TIMES AND REGISTER for September, 1891, the writer published an article upon iron, its chemistry, pharmacology, physiological and therapeutic action. The various forms and preparations of iron intended to meet the demand for its pleasant and effective administration, especially the more recent preparations were noticed, the following being of the number. The peptonate, the albuminate, Ferrum saccharatum, levulose ferride, dialyzed iron, the malate, ferrum sanguinis, and the elixir of the succinate of iron. Their merits and demerits were set forth.

The Albuminate introduced from Europe in 1878, met with little favor in this country, some claims in its favor made by Dumont not having been sufficiently substantiated.

The Peptonate, being like the albuminate, a weak and a not readily assimilable preparation has been little used.

Ferrum saccharatum and *levulose ferride* have been used more or less, but do not seem to fulfill the requirements for a strong iron preparation.

Dialyzed iron, at one time very popular, was upon extended trial proven to be practically inert as a therapeutic agent. It found its best use as an antidote to poisoning by arsenic, but even here it was inferior to the old hydratic oxide.

Malate of iron, also at one time somewhat popular, has not held the place obtained for it.

Ferrum sanguinis, a French preparation made from bullock's blood. The writer has had no clinical experience with this form. Expense, in connection with an iron preparation, especially, must be considered with the majority of patients.

Salicylate of Iron. Its use has not apparently been very extended. In some conditions it may be very useful.

The Succinate of Iron. This valuable salt iron has been suspended in an elixir which I have used quite freely and with most excellent results. Patients that could not take other forms of iron readily assimilated this with marked benefit.

In the article in THE TIMES AND REGISTER above referred to, in comparing the effectiveness of the various preparations of iron, I spoke of the old tincture as follows:

"The tincture of the chloride of iron is such a valuable preparation that we cannot afford to abandon it, and yet there are many cases and conditions in which its use is prohibited, owing to its styptic and astringent properties. Cannot some of our enterprising pharmaceutical chemists give us a form or modification of this old standard tincture, deprived of its objectionable features without imparing, in any way, its efficiency?" This has been done by Parke, Davis & Company, Detroit. It gives the writer great pleasure to be able to state that the syrup of the chloride of iron has been introduced by the house above mentioned, which more nearly meets the requirements indicated than any other yet formulated. It is sufficiently strong, containing forty drops of the officinal tincture to the fluid ounce, is palatable, non-styptic, and has no corrosive action on the teeth.

One of the most serious objections to the use of the officinal tincture of iron is that it contains a large amount of free hydrochloric acid. It is this free acid which is so destructive to the teeth. A part not probably sufficiently understood, is that this corrosive action on the lime

salts of the teeth is heightened by diluting the tincture with water, as ordinarily administered. That such is the case has been proven by experiments upon teeth placed separately in the strong officinal tincture, and in some when largely diluted with water; the first for chemical reasons, which we have no space to explain, showing little if any destructive action, while the latter rapidly attacked the lime salts of the teeth.

Professor Attfield has shown by conclusive experimentation that the presence of this free acid is not necessary for a perfect solution of the basic salts of iron, and also that the therapeutic effects of the chloride of iron does not depend upon the free acid.

From the above it will be readily seen that the absence of this free acid in the syrup is of inestimable value in the administration of this the most valuable of our hematinics.

In this connection it must be remembered that the action of the remedy is not desired when used internally, until it reaches the stomach, when coming in contact with the hydrochloric acid of the stomach, its effects are as prompt and decisive as when the strong styptic tincture is used.

Furthermore I have found frequent cases when the tincture could not be taken, the stomach rebelling from even small doses, but the above syrup was well digested and a decided improvement manifested.

I have given the syrup of the chloride of lime in doses from one teaspoonful (containing five drops of the tincture) to one tablespoonful, equaling twenty drops, to be repeated as often as may be desired.

It may be necessary at times, to rapidly instil iron into the system, when a full dose may be given every fifteen minutes for some hours with good effect.

When we remember that twenty-five minims of the officinal tincture contains nearly one grain of the metal, and that the total amount of iron in the whole mass of the blood of a healthy person does not exceed 248 grammes, or about thirty-nine grains, it will be seen that it would take but five such doses as the above to introduce an amount of iron far in excess of the normal quantity, provided it were all assimilated. That but a a small proportion of it is taken up is well known.

Another fact in this connection must, however, be kept in mind, and that is that this assimilation is in proportion to the amount ingested in a rapidly increasing ratio. Thus, if ten grains of iron be given, one grain will be absorbed; if twenty grains be given, five grains will be taken up, and so on to a certain extent. This is why such large doses are sometimes administered, and with such decided benefit, the effect being proportionate to the dose.

The advantages a preparation of iron easily administered will possess when comparatively large doses are desirable, seem to be fully shown in the syrup under consideration. This syrup of the chloride of iron will blacken both the teeth and the tongue to some extent, but much less so than when the tincture is used, but simply blackening the teeth does not indicate an injurious effect, as the discoloration is readily removed, and the teeth found to be intact.

A few especial uses of the syrup of the chloride of iron may be mentioned.

In diphtheria, where the chloride of iron is essentially necessary, this form of it will be found especially serviceable, as children will readily take it but will utterly refuse the tincture. Give two teaspoonfuls every hour or two.

In anemia push the remedy. It will improve the appetite and digestion. This is one of the peculiar properties of iron as a tonic and stomachic, when administered in a proper form.

In strumous enlargements of the cervical, inguinal and meseuteric glands, give this preparation freely.

In tuberculosis, in connection with cod liver oil and creasote, these iron tonics will be found to be invaluable. They part readily with their oxygen when introduced into the system, and in consumption the blood is especially in need of this substance. This part of the subject, must, however, be reserved for future consideration.

Parvin says the three most common causes of abortion are syphilis displacements and excessive sexual intercourse.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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THE PAN-AMERICAN MEDICAL CONGRESS.

AT a meeting of the American Medical Association, May 5, 1891, the following resolutions were passed:

"*Resolved*, That the American Medical Association hereby extends a cordial invitation to the Medical Profession of the Western Hemisphere to assemble in the United States in an Inter-Continental American Medical Congress.

"That the Committee of Nominations be, and is hereby instructed, to nominate one member for each State and Territory, and one each from the Army, Navy, and Marine Hospital Service, who shall constitute a committee, which is hereby instructed to effect a permanent organization of the proposed Inter-Continental American Medical Congress, and to determine the time and place at which the same shall be held."

Pursuant to this a committee of forty-nine gentlemen was appointed. This Committee effected an organization of the Congress. The President is Dr. William Pepper, with whom there are seventy-three Vice-Presidents, each representing one of the United States, and the different Central and Southern American States, the West Indies and Canada. The Secretary-General is Dr. Charles A. L. Reed, of Cincinnati, O. There are also nine Assistant Secretaries. The Secretaries are Dr. Ferd C. Valentine and A. Walter Suiter. The Treasurer is Dr. A. M. Owen, of Evansville, Ind.; the Chairman of the Committee on Arrangements is Dr. Samuel S. Adams, of Washington, D. C. There are six Incorporators, and a Board of Trustees, fifteen in number. There are also an Executive Committee of seven, and an International Executive Committee of twenty-two. The Committee on Ways and Means consists of seventy-five gentlemen representing different States. The Congress is to meet in twenty-two sections, each of which has numerous honorary presidents, one executive president, and about fifteen secretaries. Finally, there are auxiliary committees representing the different States.

The Congress is to be held in Washington, D. C., September 5 to 8, 1893. The registration fee is to be $10 for members residing in the United States, but no fee will be charged foreign members. The official languages of the Congress are Spanish, Portugese, French, and English. The regulations adopted require that "contributors forward abstracts of their papers, not to exceed six hundred words each, to be in the hands of the Secretary-General not later than the 10th of July, 1893. These abstracts will be translated into English, French, Spanish and Portugese, and will be published in advance of the meeting for the convenience of the Congress; no paper will be placed upon the programme, which has not been thus presented by abstract.

Abstracts will be translated by the Literary Bureau of the Congress at the request of contributors. Papers to be presented to sections must not consume more than twenty minutes each in reading, and when of greater length must be read by abstract. Papers read by abstract may be printed in full in the Transactions, subject to approval by the Editorial Committee. Papers and discussions will be printed in the language in which they may be presented. All papers read in the Section must be surrendered to the Secretaries of the Sections, and all addresses read in the General Sessions must be surrendered to the Secretary-General as soon as read; and all discussions are to be at once reduced to writing by the participants.

The Congress is thus organized on precisely the basis for which we fought the Ninth International Congress battle, that of territorial representation. It is due to those who forced that issue that a recognition of their work should be made. The coming meeting bids fair to be one of surpassing interest. We can now present the world the works of a united profession; the scientific work will be undisturbed by medical politics; and as the coincidence of the great World's Fair will doubtless bring many foreign physicians to this country the meeting will probably be the most distinguished gathering of the profession the world has ever seen.

THE effrontery with which the English journals foist their disreputable brothers upon America is quite amusing. Neill, or Cream, the "American" poisoner, happened to be born in Glasgow. Two Belfast rascals assumed the title of "The Faculty of American Physicians and Surgeons," and started to do up their countrymen. While they were speedily exposed, and everyone is aware that they never saw America, the English journals still keep harping on them as "the American doctors."

DURING forty years the lunatics in Ireland have increased from 10,000 to 21,000, in spite of the decrease in population. The *Hospital Gazette* inclines to the belief that neglect of productive labor for the field of politics has had something to do with it; but it would seem that the English land-owner ought to be affected rather than his non-paying tenants.

Now let the beer-guzzler rejoice. Weyle says that the cholera-bacillus does not take kindly to beer, and that beer-drinkers are safe. As this applies in all probability only to sour beer, it goes to show that the bacillus is wiser than the men; for it won't drink sour beer, but they do.

Letters to the Editor

MELANCHOLIA REACTION.

IN my practice, two recent cases of melancholia of apparent hepatic origin, at least the liver participated in the general atonic state, upon recovering exhibited considerable exaltation of spirits.

One, a young lady of nineteen, was treated with persistent dosimetric granules of hydrargic mild chloride, and the other, a lady of sixty, underwent a course of vigorous hot bathing; elimination action, in both cases, was probably the cause of their sudden recovery.

The exaltation was so decided in the young lady's case that I feared a mild mania had set in and that circular insanity was developing, but the good feeling in both instances merely seems to be due to relief from the preceding depression.

Some of the alternating melancholias and manias appear to be toxæmias, but mere recovery from a former melancholia would be sufficient to account for considerable exuberance by way of rebound.

S. V. CLEVENGER.

70 STATE ST., CHICAGO.

Book Notices.

A Manual of Clinical Ophthalmology. By Howard F. Hansell, M.D., and James H. Bell, M. D. 120 illustrations. P. Blakiston, Son & Co., Phila., Pa.

It is too much the fashion at present for young practitioners to try to write a book on their pet specialty. It is not a question as to how much original matter they incorporate, which, from their inexperience, they of course fail to do, but how they best disguise the *cribbing* which is so palpable in many of our recent works. To deserve praise in any honest effort means that good work, be it *cribbing* or no, should be done with some effort towards competency. Alas, the ophthalmic mountain has again gone into labor, and a "mole" has been brought forth. The authors of this "compilation" state with creditable frankness that none of the illustrations are original, would that they should have said also, that the text was *not original*. In the preface, we read that "simplicity and brevity of statement have not been sacrificed to the mere attractiveness of literary finish." With all due deference to our authors, we would like to ask in what cause the above mentioned and very desirable attributes have been sacrificed, for we find on further perusal, neither the "simplicity and brevity of statement" nor the "literary finish;" for example, on page 29 we find this classical example of descriptive English: "The conjunctiva, continues with the Schneiderian mucous membrane of the nose and the integuments of the lids at their free margins, is a mucous membrane composed of columnar epithetium with its basement membrane, and is richly supplied with vessels and nerves," and so on to the end of the book. No doubt this little manual has been issued with the best intentions, but we cannot honestly recommend it to any student who wishes to begin the study of ophthalmology.

The Physician's and Student's Ready Guide to Specific Medication. By J. S. Niederkern, M. D., Versailles, Ohio. Paper backs, 12mo, pp 115.

This is an attempt to apply the specific medications of homœopathy to the drugs employed by the eclectics.

Hygienic Measures in Relation to Infectious Diseases. By George H. F. Nuttall, M. D., etc. G. P. Putnam's Sons, 1893. Cloth, 12 mo. pp 112.

The modes by which infectious disease is transmitted, and the means of preventing such transmission, are considered, as well as the destruction of disease germs and the treatment of each article that serves as a medium for the conveyance of disease from person to person. Very plain, very explicit, fully up to the latest authorities.

A Manual of the Practice of Medicine: Prepared especially for students. By A. A. Stevens, A. M., M. D., etc. Illustrated. Philadelphia, W. B. Saunders. Cloth, 8vo, pp 501. Price, $2.50.

An epitome, resembling the quiz compend in its plan and contents.

Over 1000 Prescriptions and Favorite Formulæ from Authors, Professors and Practicing Physicians. Cloth, 12mo, postpaid, $1.00. The Illustrated Medical Journal Co., Detroit, Mich.

The various formulæ contained in this volume are *practical prescriptions* of new and old remedies for the various types of disease that affect mankind. *They are the favorite ones*, of the various authorities, for the diseases indicated. The *index* is full and complete, thus rendering the whole book easy of access. The volume is copiously interleaved, so that on the blank pages can be recorded, by pasting or copying with pen or pencil, any other prescription suitable for any disease that is on the opposite page of the book. The whole is comprised in a neat cloth-bound volume of nearly 300 pages, and will be mailed to any address upon receipt of its price by the above publishers.

The Open Court Publishing Company will issue for the holidays, "Truth in Fiction, Twelve Tales with a Moral," by Paul Carus.

The Messrs. Macmillan & Company announce that the recently completed edition of Foster's Text-Book of Physiology in four parts is to be supplemented by the issue of an appendix on "The Chemical Basis of the Animal Body," by A. Sheridan Lea, Sc. D., F. R. S. Dr. Lea is Lecturer on Physiology to the University of Cambridge, England.

Among Brentano's announcements this fall are: "Chicago," the third volume in the Views of American Cities. "The Buildings of the World's Columbian Exposition," a set of plates in photogravure. "The World of Music," three volumes on "The Great Composers," "The Great Singers," and the "Great Virtuosi," by Comtesse de Brémont. Motteux's transalation of Don Quixote, in four volumes, illustrated with thirty-seven original etchings by Adrien Lalauze. The "Petite" Library, the life of Chopin, Liszt, Mozart, Beethoven and selections from Heine, Schiller and Goethe. Fairbairn's Book of Crests. "Alma, or the Story of a Little Music Mistress," by Emma Marshall, and "The Queen's Navee," by Commander C. H. Robinson, R. N.

News.

THE FIFTH PURE FOOD EXPOSITION.

THIS annual display of high-class food products has become quite a popular feature of the Thanksgiving season. Each year the exhibition has attracted larger crowds, until at the present time the problem is how to find room to accommodate them. Industrial Hall during the past two weeks has been packed with visitors, admiring the beautiful display, and testing the samples offered. Of course the "sample fiend" has been abroad in her might; but the feature of the present exposition has been the large number of purchasers presenting themselves. More than one firm has announced sales sufficient to pay all the expenses of the exhibit. To those introducing new articles of food, the opportunity is especially valuable, as in no other way can the prospective consumer so readily be induced to give the goods a trial.

Of those now exhibited for the first time, probably the most important are the products of N. K. Fairbank & Co., of Chicago. These consist of cottolene and other products of cotton-seed oil. The advantages of substituting a vegetable fat for one of animal derivation are too well known to require demonstration; and become more evident with each new step in our knowledge of the communicability of microbic disease. No one now doubts the derivation of tuberculosis from the animals furnishing food to man; any more than that the pig is the source of trichinosis, or the cow of taenia and cysticercus. There are reasons for believing that carcinoma and sarcoma may eventually be traced to the same source. The difficulty in establishing a market for cotton-seed oil has been in the kitchen. In Germany and Latin Europe, the liquid oils are in general use for cooking and for the table, but in this country they are practically unknown, excepting in salad dressings. Bridget knows lard and butter, and these only; and chemists may demonstrate the superiority of oil, hygienists may prove its healthfulness, and the vendor assure her of its economy; she will continue in her old way.

Washington Butcher's Sons endeavored to introduce the cotton oil, under the name of olive butter, and the Cotton Oil Product Company made a short lived effort in the same direction; but neither was successful.

The present product is put in the solid form and cannot well be distinguished from the better qualities of lard. It is composed of cotton-seed oil and beef-fat. The manufacturers claim that cottolene replaces lard in all cases, in about two-thirds of its weight, thereby saving one-third of the quantity required; the market price being about the same. Should the present effort succeed, it is probable that cottolene could be produced at a lower price, as at present not more than one-fourth of the product is utilized. The company issues a book containing 600 selected recipes, by Mrs. Corson, Marion Harland and other culinary authorities. This should serve the purpose of removing any difficulty in adapting the cottolene to kitchen uses.

An allied company, the Union Oil Co., of Providence, R. I., makes an exhibit of salad oils that cannot be distinguished from the true olive oils.

The most beautiful exhibit is that of Van Houten & Zoon, occuping the stage. This is filled with hemlocks and firs, hung with Chinese lanterns, and set with small tables, at which Van Houten's cocoa is served to all comers. Mr. Thomas

V. Cobb has charge of the exhibit, and is responsible for its artistic beauty. He has as assistants, twelve pretty maids, in Holland costume, who serve the guests with cocoa. The girls' headdresses are of old Holland lace, costing $18 a-piece; with antique Dutch ornaments of pearls and gold. One of these veils was worn by a maid of honor at the Dutch court, when she presented the King each morning his cup of Van Houten's cocoa.

That cocoa has ceased to be a luxury for the rich, and is entering into sharp competition for the favor of the many, is evidenced by the number and beauty of the exhibits. One firm circulates a calculation that ninety cents' worth of cocoa will go as far as $1.50 worth of coffee.

Handsome exhibits of cocoa were also made by H. O. Wilbur & Sons, of Philadelphia, and Walter Baker & Co., and Bensdorps, of Boston. The cocoa-theta made by Wilbur appeared to be very highly appreciated.

The Clarke Coffee Co., of Boston, presented a new candidate for public favor in their cocoa-coffee. This is explained to be composed of cocoa deprived of its superfluous fat, and coffee deprived of its tannic acid. By these means a product is obtained that is claimed to be specially suited to the great class for which neither tea, coffee, nor chocolate is "just the thing." At any rate, the cocoa-coffee is a very pleasant beverage.

Quite a variety of canned soups was exhibited. Among them, the Huckins' products maintain the high reputation they have enjoyed for thirty-seven years. That this field is not left entirely to them is evidenced by the excellence of the soups made by the Armour Packing Co., of Chicago; W. A. Millar & Co., of this city; the Muhlen-Blackledge Co., of Indianapolis, and the T. A. Snider Preserve Co., of Cincinnati. The Millar Company also make an extract of beef, so palatable that the Liebig people must look to their trade. Burnham's clam bouillon, a preparation introduced to Philadelphians first by this journal, has apparently survived all its competitors; as no other is exhibited. The value of this is enhanced by the addition of a little salicylic acid, that preserves the bouillon and exerts an antiseptic action on the intestines at the same time. This important subject will soon be treated at length.

The importance of this Exposition in the estimation of manufacturers of foods is well shown by the exhibit of the Cudahy Packing Co., whose home office is in South Omaha. They present a beef-extract and a preparation of pepsin.

Of other articles of diet, some of which interest the physician as desirable for his patients' welfare, and others as conducive to his own opulence, we may mention "Hecker's Buckwheat" (claimed to cure dyspepsia, rheumatism and biliousness); Napheys' Lard, Philadelphia; Geo. Boyd & Sons' Queen Table Syrup, Philadelphia; Hires' and Lear's Root Beers; Krout's and Cleveland Baking Powders; B. S. Janney, Jr., & Co., cereals, Philadelphia; J. H. Michener & Co., hams, Philadelphia; Weikel & Smith, spices, Philadelphia; Finley, Acker & Co., groceries, Philadelphia; Thomas Martindale & Co., wines, Philadelphia; Roasted Cereals Co., New York; Pettyjohn Breakfast Food Co., New York; The Wm. Lea & Sons Co., Wilmington, Del.; The American Cereal Co., Akron, O.; Trenton Cracker Co.; New York Biscuit Co.; Purity Dried Fruits Co., Quincy, Mass; N. E. Peanut Taffy Co., New Haven, Conn.; Plymouth Rock Gelatin Co., Boston; Crystal Gelatin Co., Boston.

T. E. Dougherty's representative was busily engaged in furthering our interests by baking pies of the N. E. condensed mince-meat, and giving them away to all comers, at the rate of 400 every day. The Helvetia Milk Co. exhibited a valuable article in their condensed cream; put up in cans. This is indispensable to him who loves that crowning point of a good dinner, a little cup of strong, unsweetened Mocha coffee.

The exhibit was not confined to food alone, but included some other articles of utility. The Ridgeway Refrigerators occupied a prominent place. These are claimed to keep the contents in better condition and to require less ice than others; on account of the condensation of moisture and the retention of the drip from the ice until its cooling capacity has been exhausted. An improvement in ranges was shown by Thomas, Roberts, Stevenson & Co., consisting of

gauze doors to the ovens, allowing some escape of hot air and ingress of cold; the circulation resulting in better cooking, avoiding the drying of meats by absorption. Mrs. Rorer recommends these ovens highly—and she ought to know.

Wolf & Randolph exhibit a transparent paint for glass and wood, entitled "Pik-Ron." It could be utilized for lettering signs on windows.

"Pyle's Pearline," "Kendall's Soapine," "Grady's Scouree," North Bros.' household hardware, Queen Silver Polish, may, perhaps, interest the doctor's family.

It is much to be regretted that the managers allow their otherwise creditable exhibit to be marred by the admission of several nostrums. These are not foods, nor in any way related to the objects of the Exposition; but interlopers that do not belong to it. They are also of a highly objectionable nature. Any one who advises acetanilide compounds for headaches, without regard to their nature, is liable to kill somebody; while the man who advises people with diphtheria to dally with a patent nostrum till the curable period has gone by, will have more to answer for than the writer would care to be burdened with. We hope that next year's Exposition will be purged of these objectionable features.

The Medical Digest.

Biological Society of Paris and Ferran's Method of Inoculation Against Cholera.—A communication from Ferran of Barcelona was received, in which the following two points were made: 1. That the inoculations lately recommended by Doctors Haffkin and Klemperer are newly developed applications of the process invented and used by him since 1885. 2. That in the future during epidemics of cholera the inoculation by the wholesale will be both simple and undetrimental; that 5 to 6 drops of a culture of the comma bacillus can be drank and a quick curing cholerine excited.

The chairman, M. Chauveau, said if this be true, it is certain that cholerine, which precedes cholera, will afford immunity to the individual; that some day the method of cholerisation will consist in this, that the wells and reservoirs will be supplied with the necessary quantities of weakened cultures so that the water drank by the population will effect a sort of inoculation. Even if the sewers be filled with the comma bacilli, no danger can any more ensue when the whole world has been made immune! Undoubtedly the priority of discovery belongs to Ferran. One still, as formerly, makes light of the Spanish doctor's labors, apparently because he proclaimed them in a very unscientific form. The utilization of the drinking water, as a medium through which to cause inoculation, seems empirical, imprudent and unscientific.

M. Laveran said that ignorant people have often accused the doctors of poisoning the wells (Russia.) One should consider what revolutions, in a certain degree justified, this process would provoke.—*Deutsche Medizinal-Zeitung*.

Intestinal Antisepsis. — Not very long ago I was called to see an old soldier who had been troubled with attacks of diarrhœa ever since the war. Within recent years his attacks had become more severe and more protracted. He was stricken down with one of his periodical spells of sickness last August, and remained under the care of two physicians of unquestionable ability for two weeks. When I was called to see him I found myself confronted with a desperate state of affairs. He had evidently been freely dosed with opiates, for his pupils were contracted, his breathing was heavy, his senses benumbed. His anus was sore from the evacuations and the frequent use of astringent enemata. In spite of treatment the diarrhœa had continued with unmitigated severity. The outlook was certainly not encouraging. I ordered the patient surrounded with hot bottles and administered spir. frum. ℥ss subcutaneously. Then I ordered zinc. sulphocarbol. gr. $\frac{1}{6}$ and cupri arsen. gr. $\frac{1}{1000}$ every ten minutes until twenty doses had been given. Two hours after the first granule of cupri arsen. had been administered the diarrhœa stopped, and there were no more stools for forty-eight hours. On the third day the patient had an ordinary, non-offensive alvine movement.

Within a week he was up and about. The wonderful effect of cupri arsen., preceded by a reliable disinfectant, like the sulphocarbolate of zinc, in cases of summer complaint, is frequently a revelation.—Juettner, *Lancet Clinic.*

Flaming Surgical Wounds. — M. Felizet gave an interesting account of the treatment of several cases of surgical wounds by the flame of the blow-pipe. He said that in many surgical lesions, and tuberculous affections in particular, it was often difficult to draw a positive line between the healthy and the diseased tissue, consequently it is necessary to complete the operation of the knife, the chisel, or the curette by the application of certain caustic solutions, such as chloride of zinc, &c. After the most complete resection there remains always enough of tuberculous matter to infect quite a series of animals when injected. The method he has employed in a great number of cases had for aim to destroy the diseased parts and to provoke a reaction which produces a zone of protection against the invasion of infectious matter. The principle of this method consists in passing rapidly over the wound the flame of a blow-pipe of which the temperature attains 27-32° F. He obtained by this treatment thirty-eight cures with suppuration, fourteen resections of the knee, eight of the hip, five cold abscesses of the same joint, one enormous abscess of the breast, one adenitis, &c. The lips of the wound are protected by several compresses steeped in an antiseptic solution, and the flame of a blow-pipe is passed rapidly over all the raw surface. The reaction is insignificant, and the lips of the wound, which are always left untouched, are brought together over a seared and consequently dried surface. M. Nélaton said that in two cases of cancer he was able to retard a relapse by the use of the gas cautery.

Surface Color and Contour and Visceral Lesions.—Dr. T. H. Manley, of New York, concludes (*Doctor's Weekly*) that from the standpoint of diagnosis, as a rule, surface indications in cases of serious violence sustained by any one of the three great cavities seldom furnish reliable criteria as to the nature, extent, or situation of internal injury. In a considerable number the surface disorganization, particularly in cranial traumatisms bears no ratio to the state of the underlying parts, as, in not a few, the surface class may be of appalling proportions, yet vital centers wholly escaping. In another, the least numerous class, there is a close correspondence with the extent and quality of the peripheral and central disorganization. Profound constitutional symptoms, in which psychical manifestations predominate, are of very serious import, and are generally attributable to a loss of blood or leakage from a hollow viscus, when force is spent on the thorax or abdomen. In those lesions confined to the surface, the general system usually escapes immediate implication and tends to prompt recovery. In mixed cases the danger is always greatest, yet those who survive the immediate effects may advance toward recovery, it must not be lost sight of, that not a few who have sustained concussive violence, though they seem to have made a good recovery, may develop at varying periods after the primary injury, cerebral, cerebro-spinal, or parenchymatous degeneration in organs, and thereby shorten life, or cause an existence of pain, misery and helplessness. Accordingly, some time must always elapse before the surgeon can speak with definite certainty of ultimate results in this latter class of injuries.

Prolapse of the Rectum and Treatment Therefor.—Dr. Thomas H. Manley regards recto-anal prolapse as essentially a herniated condition, being dependant on the same factors, and like hernia is common and curable in early childhood; while in the adult it may persistently recur. The treatment which he recommends in simple cases is divided into constitutional and local. For the former depletion of the portal system by an occasional mercurial purge; with rest in bed in the dorsal or lateral decubitus, for a period of from one week to a month.

Local measures are taxis and anal support by truss pressure. He has found that the simplest and safest surgical measure for the radical and permanent ablation of a procedentia recti is an enterectomy, or the complete excision of

the redundant, hypertrophied tissues. Cases with illustrations are included which had been treated by him successfully in this way.—*Weekly Med. Review.*

NOTE ON PEROXIDE OF HYDROGEN IN DIPHTHERIA.—I agree with Dr. F. H. Williams, of Boston, U. S. A., as to the value of a thirty volume solution of the peroxide of hydrogen in the local treatment of diphtheria as described in the *Medical Press and Circular* of October 26, p. 436. I wish, however, at the same time, to add to this commendation the important warning that the thirty volume solution should never be used except on open surfaces. In 1857, when I began to experiment with it, the peroxide was the rarest of chemical curiosities; it had never been used in medicine, and I had not a spark of light to guide me as to the number of volumes that could safely be employed medicinally. I began with strengths of four and five volumes; then I moved up to twenty and thirty volumes; but I soon learned that with the higher volumes the oxidation was so rapid in the presence of pus and similar disturbing substances the effect was practically explosive in character. In a case of abscess of the antrum I injected a drachm of a thirty volume solution through an opening into the cavity made by the extraction of a tooth and free perforation, and witnessed an action which for a few seconds alarmed me, owing to the gush of purulent foam that followed. I found afterwards that for the destruction of pus, weaker solutions would answer well enough, and from that time until my first publication on the substance made to the Medical Society of London in 1860, I gave to this question of volumes the most careful study. In the end I came to the conclusion that, on the whole, the ten volume strength was the most practical, and I fixed on that as a standard which has been generally adopted by the profession. I have never seen occasion to suggest the alteration of that standard, but there are exceptional cases where a solution of greater strength may be used, and diphtheria is one of these. By the local application of the solution to the diphtheritic membrane, destruction of the membrane and adhesions of it are more rapidly secured, than by the lower volumetric strength, and as the surface is open there is no danger of creating tension or forcible rupture of parts. The same rule applies to applications of the thirty volume solution to the cutaneous surface in phagedæna, syphilitic sore, and senile gangrene.

On the other side, there are cases in which the ten volume standard solution may be advantageously used in very small quantities. I have a case in hospital just now which illustrates this point. A woman is suffering from a circumscribed abscess discharging from a fistulous opening in the abdominal wall. Here I introduce the solution in small quantities by saturating a pledget of cotton with the solution, introducing it through the sinus by the probe and repeating the dressing frequently. By this plan I have seen a large cavity contract and close up in the most satisfactory manner. In the treatment of *fistula in ano* this method ought to supplant, in many cases, operation by the knife.—B. W. Richardson, *Med. Press and Circ.*

PRELIMINARY NOTE ON THE TREATMENT OF SYPHILIS BY DOG'S SERUM.—Professor Tommasoli, of Modena, has recorded (*a*) some results obtained by him in the treatment of secondary syphilis by means of hypodermic injections of serum prepared from the blood of lambs and oxen.

In August of this year I prepared some dog's serum and had the opportunity of trying it upon two patients of the Lock Hospital who were suffering from recent syphilis. The results obtained were good as far as the cases were followed up, the rash and other manifestations quickly disappearing under the influence of the injections. Unfortunately I have lost sight of the patients, due probably to the injections producing a somewhat painful swelling, and partly also due to the fact that they are better, and have in consequence not returned to report themselves. I shall hope later on to record some other cases where the treatment has been carried out more fully, and put on record the results thus obtained.

The *rationale* of the treatment appears to be the marked bactericidal action of freshly prepared serum, and it is essential

that the serum should be used when perfectly fresh, otherwise the results obtained will be disappointing.

I have noticed, as other observers have also done, that the first injection or two will send the temperature up slightly, but it quickly becomes normal, and is apparently of no moment. There is also occasionally formed at the seat of the injection a localized swelling, which is tender to touch, and the skin over it is slightly injected, but suppuration never takes place, and the tumefaction soon subsides. Now and then the injection may be followed by an urticarial rash, which, as far as I have seen, does not spread very far from the seat of the injection, and soon disappears.

The serum was injected into the back in doses of two cubic centimetres twice a week, with a Koch's hypodermic syringe, which was well sterilized, and it is a safe precaution to thoroughly wipe the skin over the proposed site of injection with 1 in 20 carbolic lotion.

The method of preparing the serum is as follows:

The blood is taken aseptically from the carotid artery, and allowed to flow into a large sterilized test-tube at the bottom of which is a little oxalate solution to prevent coagulation. When about three parts filled the tube is plugged with cotton-wool, and the tubes put in a centrifugal machine, by which means the corpuscles and plasma are separated. The plasma is then decanted off, and allowed to clot, from which the serum separates, and can be drawn off into small sterilized test tubes, which are plugged with cotton-wool; or if required to be transported, it may be drawn into sterilized glass pipettes, the ends of which can be sealed in a gas flame.

Afterwards a necropsy is performed on the dog, and serum only retained if the animal is perfectly healthy.

I have had a small electrical motor made, attached to a turn-table, which forms a very convenient apparatus for centrifugalizing small quantities of blood, as it can be attached to an ordinary wall plug where the electric light is laid on, and as it is essential to use the serum freshly prepared, one only makes it as it is required.

—Cotterell, *Med. Press.*

Diagnosis of Acute Anterior Poliomyelitis.—The essentials for an early diagnosis are a slight fever, local tenderness, flaccidity of muscles and a failure to respond to a faradic current strong enough to cause contraction in the sound limbs. The tendon reflexes are abolished also very early, but as they are difficult to obtain in infants, their investigation has not been insisted upon —Church, *Kansas Med. Jour.*

Cordier Thus Presents the Case for the Coeliotomists:—(1) Our endeavors should be so directed in the treatment of this class of cases, as to effect the most cures in the shortest period, even at the expense of a sacrifice (?) of diseased and useless organs.

(2) Very few, if any, pelvic abscesses are suitable cases for vault drainage.

(3) Pelvic abscesses are, in the great majority of instances, secondary to tubal and ovarian diseases. Traumatic cases being the rare exception.

(4) In cases where (admitting the existence of such), the abscesses are the result of lymphatic absorption, the tubes will be found diseased also by the extension of the disease from the uterus by continuity, and will require removal also.

(5) With our present diagnostic skill, a differential diagnosis is impossible as to whether we have to deal with a condition suitable for vault drainage or not, as per rules and indications laid down by some advocates of this procedure.

(6) Imperfect and incomplete operations are poor conservative agents, and are sure to disappoint the patient and bring censure to the surgeon.

(7) Breaking up all adhesions and removal of all diseased masses brings the speediest and surest cures. Adhesions are sources of much suffering and danger, and any operation is unfinished that does not liberate all imprisoned sound organs and remove all diseased structures

(8) Time and expense demand in many cases the quickest route to complete recovery. A low death rate attends the operations performed on the poorer classes. Early surgery and absence of prolonged tinkering are the factors in the successes in this class of patients.

(9) If a woman escapes the dangers to life from inflamed uterine appendages, she has left crippled and useless organs liable to relapses.

(10) Uterine appendages are not necessary to a woman's healthy existence. Useless diseased organs are sources of invalidism, and dangerous to harbor. Healthy organs should not be removed. —*Annals of Gyn. & Ped.*

THE EFFECT OF ERGOT ON THE INVOLUTION OF THE UTERUS DURING THE LYING-IN PERIOD.—In the Transactions of the Obstetrical Society of London, vol. XXX, for 1888, will be found a paper by Dr. C. Owen Fowler and myself, in which observations are detailed pointing to this general conclusion; "That the administration of an ergot mixture during the first fortnight of the lying-in period appreciably increases the rapidity with which the diminution in size of the uterus goes on." This conclusion was reached by comparing the average rate of involution (*a*) in a number of cases, taken without selection, in which ergot was given, with (*b*) the average rate of involution in an equivalent number of cases, also taken without selection, in which ergot was not given. In the Annales de Gynécologie, vol. XXIX, for 1888, p. 175, is published an investigation by Dr. Emile Blanc, of Lyons, conducted in a very similar way, but which led him to the conclusion that "ergotine administered during the first five or ten days of the lying-in period exerts no favorable influence on uterine involution." Dr. Blanc's research was quoted at the time in several English journals. These two investigations seem to contradict one another. I desire to point out that they do not; but that, on the contrary, they confirm one another and show the real value of ergot in the lying-in period. The reason that Dr. Blanc's conclusion differs from that of Dr. Fowler and myself is this, that he *chose* the cases in which to test the effect of ergot. He took only cases of "normal delivery at full term, excluding premature labors, cases with febrile disturbance, and all cases needing any intervention" (p. 177). These cases excluded are just those in which the causes known to hinder involution are present. Dr. Fowler and I took cases without any selection, and therefore among ours were included cases in which the causes of subinvolution were present. Dr. Blanc's research shows that in a normal lying in the uterus completes its involution as well without ergot as with it. The paper by Dr. Fowler and myself shows the beneficial effect of ergot in counteracting the causes which retard involution. Dr. Blanc's paper contains nothing in opposition to this view; on the contrary, he expressly says: "Against secondary hemorrhage the drug maintains its position. Its action is the more efficacious the nearer the delivery." The practical conclusion is, that while in a perfectly normal lying-in ergot is not required, yet when any cause of imperfect involution is present, or suspected to be present, ergot given throughout the lying-in period will counteract its influence, will promote involution, and should be given.—Herman, *Lancet.*

"THE WORLD DO MOVE."—From the pamphlet on classification and rules published by the World's Columbian Exposition we quote: "Rule 15. Articles that are in any way dangerous or offensive, also patent medicines, nostrums and empirical preparations whose ingredients are concealed will not be admitted to the exposition."

RESORCIN WITH BISMUTH, FOR ASIATIC CHOLERA.—This remedy is receiving considerable attention. Testimony is put forward in its favor by many where it has been tried with success. In mild cases it is admitted to be of some use, but the protraction is considered dangerous, as after this period it reappears. With vomiting, thirst and diarrhœa a one per cent. solution of tannin is recognized as an important adjunct. The prescription is:—

Resorcin, gr. ½ to j.
Bismuth subnit, gr. v to ʒ.

INSURANCE AGAINST A SUDDEN INCREASE IN THE FAMILY.—A company has recently been organized in London, the ostensible object of which is to insure married people against twins and triplets. A married man expecting to become a father must deposit £5 to become a policy-holder. In case the policy-holder's wife

has twins he will receive £50; in case she has triplets, £75. The company is called the "Provident Bounty Association." It has issued a prospectus calling attention to its conditions of issuing policies, which it says are simple and are intended to appeal especially to the lower middle class, including young book-keepers, shop clerks and small tradesmen.—*Med. Review.*

At a recent meeting of the American Association of Obstetricians and Gynecologists, a local general practitioner was called upon to make a few remarks relative to the subject of ectopic gestation, then under discussion. He gave a graphic description of such a case, which he had failed to recognize, and which had rapidly terminated in the death of the ill-fated patient. "However interesting the etiology, pathology or technique may be to the fellows of this association, point out to us the salient features by which we may, at the earliest possible moment, recognize such conditions and, without delay, turn over these appalling cases to your experienced hands, then shall we mutually have robbed death of many a victim." The quotation does not contain his exact words, but it is the substance of his appeal.—*Cleveland Medical Gazette.*

DYSPEPSIA.—M. Jules Simon has found the following treatment very useful in cases of obstinate indigestion :—

Tincture of Cascarilla,	}	
" Cinnamon,		
" Gentian,		ʒij;
" Colombo,		
" Rhubarb,	}	
" Nux Vomica,		ʒj;

Ten to twenty drops in a little water before each meal.

STRONTIUM BROMIDE IN VOMITING.—Coronedi (*Lo Sperimentale*) has tried bromide of strontium in a number of cases of vomiting from various causes; the preparation is most successful as a gastric analgesic in vomiting of nervous origin. It is given in doses of two grammes twice daily immediately before meals. Its mode of action appears to be that of the other bromides, causing first diminution of the excitability of the nerve centres, and then of the nerve endings in the stomach. Of the bromides, that of strontium is the one which contains the least proportion of bromine; it seems probable, therefore, that some of the analgesic effect is due to the metallic element.

For small hemorrhoids and pruritus ani we have found no better remedy, as a local application, than the following :

℞.—Hydrarg. chlo. mitis . . . . . gr. xx.
Cocainæ muriat . . . . . gr. x
Petrolati . . . . . ʒi
M. ft. ung.
Sig. Apply as directed.
—*Western M. & S. Reporter.*

T. W. Balte reports eight cases of alcohol habit cured by hypodermics, of strychnine gr. $\frac{1}{20}$, and atropine, gr. $\frac{1}{100}$, twice daily. There are no such disastrous effects as those induced by the Keeley treatment.

News and Miscellany.

Deaths and Interments in the City of Philadelphia from the 12th to the 26th of November, 1892.

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess	3	2	Hernia	2	
Aneurism of the Aorta.	2		Inanition		9
Apoplexy..	16		Inflam'n Brain	5	12
Anæmia	1		" Bronchi	6	6
Bright's Disease	7	1	" Kidneys	4	1
Cancer	11		" Liver	1	
Casualties	5	3	" Lungs	25	17
Congestion of the Brain	1	1	" Periton'm	7	2
" Lungs		2	" Pleura	1	
Child Birth	1		" S. & B'wls	1	5
Cirrhosis of the Liver	5		Intussusception		1
Consumption of Lungs	48	6	Locomotor Ataxia	1	
Convulsions		10	Malformation		3
" Puerperal	2		Marasmus		10
Croup		1	Old Age	13	
Cyanosis		4	Paralysis	15	1
Debility	1		Poisoning	1	
Diabetes	2		Rheumatism	1	
Diphtheria		40	Softening of the Brain	2	
Disease of the Heart	29	1	Suffocation		4
" Liver	2		Suicide	1	
Drowned	2		Syphilis	1	
Dropsy	1	3	Tabes Mesenterica		1
Dysentery	1		Teething		2
Effusion of the Brain		2	Tetanus		1
Erysipelas	1		Tumor	2	
Emphysema	2		Ulceration of the Bowels	1	
Fatty Degeneration of the Heart	2		Uræmia	2	
Fever, Malarial	2		Whooping Cough		2
" Scarlet		5			
" Typhoid	2	1			
Gangrene	2		Total	243	159

The Times and Register.

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PAGE

ORIGINAL ARTICLES:

THE DIAGNOSIS AND THE SURGICAL TREATMENT OF HEMORRHOIDS, INTERNAL, EXTERNAL, INFLAMED OR ULCERATING, BY FULL, BUT GRADUAL ANAL-DILATATION; BY LOCAL ANALGESIA, COMBINED WITH PRESSURE-MASSAGE; ALSO A FEW NOTES ON HEMORRHAGIC HEMORRHOIDS. By Thomas H. Manley, M. D. 625

AN IMPROVED METHOD AND NEW INSTRUMENT FOR RADICAL CURE OF HEMORRHOIDS WITHOUT OPERATION. By E. Wyllys Andrews, A. M., M. D. 631

A CONSIDERATION OF HEMRORHOIDS AND THEIR MEDICAL TREATMENT. By Frank S. Parsons, M. D. 633

THE TREATMENT OF HEMORRHOIDS. By S. T. Armstrong, M. D., Ph. D. 635

THE TREATMENT OF ANAL FISSURE, OR IRRITABLE ULCER OF THE RECTUM. By Lewis H. Adler, Jr., M. D. 638

PAGE

EDITORIAL 642

LETTERS TO THE EDITOR:

Hemorrhoids. *Geo. H. Kirwan, M. D.* 643
Vesical Irritability. *Jno. A. Bryant* 643
Suggestions for Special Issues. *A. N. Spurgeon* 643
The Atmospheric Tractor. *C. C. Gentry* 643
Iodoform Versus Aristol. *Richard H. Gibbons, M.D.* 643

MEDICAL DIGEST:

Anal Abscess—Rectal Cancer (*Dujardin-Beaumetz*)—Anal Fistula (*Felix Guyon*)—Hemorrhoids (*Andhoni*—External Hemorrhoids (*Reclus*)—How to dilate the Sphincter Ani—Pruritus Ani (*Laplace, Bartholow, Besnier, Heath, Waugh*) 647

NOTES AND ITEMS ..... iv, x

THE DIAGNOSIS AND THE SURGICAL TREATMENT OF HEMORRHOIDS, INTERNAL, EXTERNAL, INFLAMED OR ULCERATING, BY FULL, BUT GRADUAL ANAL-DILATATION; BY LOCAL ANALGESIA, COMBINED WITH PRESSURE-MASSAGE; ALSO A FEW NOTES ON HEMORRHAGIC HEMORRHOIDS.

BY THOMAS H. MANLEY, M. D.,

[Visiting Surgeon, Harlem Hospital, New York.]

I HAVE already, in different medical periodicals of late years, been permitted to occupy space, in setting forth, in diverse contributions, the structural anatomy and functions of the *intestinum amplum*; or the large pouch-like terminus of the rectum, the greater part of which is lodged in it, immediately contiguously to the ischiatic fossa.

This being the case, I will not occupy time, in the present instance, in considering structure and rectal phenomena, in the ano-rectal district, but, after a few reflections in a general way, proceed at once to diagnosis and treatment.

In the beginning, I may say, that since I commenced to make a critical study of ano-rectal diseases, I have found to my amazement and confusion on making a large number of examinations on the dead and living body, that a hemorrhoidal or varicose state of the vascular part of the lower rectum was present in more than ninety per cent. I discovered by interrogating the living, that of those in whom pathological changes of a hemorrhoidal order was present, not more than *ten per cent.* ever were aware that they had piles at all. We must then infer that something more than the mere presence of a few scattering tabs of tissue around the anal margin or small neoplasmata within, should co-exist, to bring into play that most agonizing disorder, designated hemorrhoids; a condition, which of all others, can make one's life wretched and miserable. And when intermittent paroxysms of furious itching, pain and straining come on, particularly when one "turns in" for a night's rest, the distress and torture which they often excite are something dreadful.

We will, in this issue of the TIMES AND REGISTER, discuss the subject from a medical standpoint, and illustrate the share a disordered system contributes in the etiology, but what I wish to particularly emphasize is, that if we would strike at the root of the malady, we must address our attention to something besides the deeply congested varicosities which line the walls of the bowel, and endeavor to institute a line of treatment which will not involve a mutilation and loss of blood, or perhaps lay the foundation for subsequent dangerous consecutive hemorrhage, ulcer, or fistula, and something which will not inflict great shock to the system, but will be permanent in its results.

I may say here, that the measures which will be recommended are only for those chronic, intractable hemorrhoids, which simple, constitutional and local measures will not control, which are of a chronic character and rebellious to local treatment.

DIAGNOSIS.

Let us be sure that "we have caught the hare before we light the fire to cook him."

How many poor creatures there are with an itching, irritable, painful rectum, with their anal excavation plastered over with various "pile ointments," partaking freely of bilious medicines, who are as innocent of hemorrhoids as the unborn babe? Any trouble in the rectum is almost invariably set down as "piles."

Here are a few illustrations. Patient sent to me by a practitioner for unmanageable piles. I examine his rectum and find an immense, punched-out tuberculous ulcer.

A young woman comes to me with "ulcerating piles." The salves do her no good. Her rectum is full of ulcerating and sloughing condylomata. Papa —her husband—had been cured of his piles (?)

A physician comes to me from the country with his patient, who had terrible bleeding piles, which terribly exsanguinated her. On examination high up, I find two or three angiomatous polypi.

A young physician brings his father to me to examine his rectum, as he has been latterly under treatment for piles. He has a rectum as hard as a horn, which, at the sphincteric orifice, is one mass of cancerous deposit.

Many come to be treated for hemorrhoids, who have fissure, ulcer or stricture of the rectum.

Hence, from the foregoing, it is clearly evident, that before we think for a moment of healing chronic piles, we must assure ourselves that our patient really has the genuine article.

Now, in reaching a diagnosis of hemorrhoids, we must depend mainly on the faculties; the hearing, touch and sight.

In the large majority of cases, a skillfully conducted oral examination, along with the cautious, but searching glance of the eye, will aid enormously, as a preliminary. You will see the hectic of phthisis, the tinged anæmic skin of cancer, and if the patient has, so-to-speak, "held on to his hair," in syphilis, by putting this and that together, you will draw out enough to give you good reason to suspect it. By this sort of an examination, too, one will lead the patient on, until you secure his full confidence, as you may anticipate him in many details.

In simple, chronic hemorrhoids, there will seldom be much difficulty in reaching definite conclusions as to their presence, before we touch them.

Examination of the Rectum.—Two things are quite indispensable for a rectal examination. They are first, touch; and second, good light—the use of vision.

Now the first is the most valuable in a general way, because with many sensitive, modest women, a visual examination often is refused; is only very reluctantly consented to, so that if you can not only make an examination, but also treat her affection under her clothing, and cure her, you will, for her lifetime, have the fullest measure of her gratitude.

Thoroughly scientific examination of hemorrhoids is not always possible, without a full exposure of the closed or opened anal portal. It is almost unnecessary to say that in malignant diseases or polypi, the sense of touch is quite enough as a local diagnostic resource.

Technique of Rectal Examination.—When a thorough and complete examination is imperative, as in cases of ulcerating or bleeding hemorrhoids, the patient should be placed on a table from three to four feet high; if a male in the dorsal decubitus; and, if a female, on the left side. And I may say here in parenthesis, that chronic pathological changes in the rectum are comparatively very rare, except in proportion in middle-aged or old people. We must have good light. Now, it must not be inferred, when good light is mentioned, that a voluminous glare is needed. On the contrary, what we need is not brilliancy, but a *contrast light*. If we have clear sunlight, it is simple; but if on the contrary the day is gloomy, or an examination is made in the darkness of night, a simple tallow-dip, a luminous candle, or two; both lit at once, the light reflected with a common hand-mirror into the rectum, or on the cutaneous margin of the anus will answer.

However, before we proceed to inspection, we should first make a digital examination. I would recommend the amateur to first familiarize the touch, and acquire the *tactus-eruditus* by examining the recta of the healthy in every possible instance, when a pretext presents itself.

The patient being now resting com-

fortably, and not unduly exposed, it is well, always to assure him or her that there will not be much pain inflicted, and that he must not resist us. The anal sphincter is always closed by a tight grip, in hemorrhoidal disease, and acts not altogether unlike a stricture in the dry urethra, in the first passage of instruments. We must then commence manipulations on the sphincter-ani by a species of coaxing, "catch it off its guard," and then thoroughly subdue it.

To commence with, I generally sponge the part freely with warm water, after which, with my index finger well-warmed and oiled, the pulp is brought slowly up against the anal folds. At first the corrugations of the sphincter plaits are drawn tighter than ever, but the finger is kept there, and gentle, but steady pressure is begun against it, when we are soon conscious of a giving way as the tip enters. Now that we are within the anal cul-de-sac, into the rectum, we give our patient a little rest, and we need a little ourselves, for if we would succeed with these cases, without torturing our patient, we commence cautiously and slowly, so that after the sphincter is passed, we are often not a little fatigued. At any rate the hand is tired. I have spent twenty minutes more than once in making my finger pass the sphincter. The tip of the finger is now kept in the rectum, without advancing farther, for at least five minutes. In the meantime, its point being slightly worked while there, by the weight of the hand, quiet but steady tension is made in the direction of the long axis of the longitudinal fibres of the sphincter-ani.

A little fresh oil is now dropped on the engaged finger—the part exposed—and it is sent into the webbing. A "to and fro" motion now is given this finger before another is introduced. It is lifted up in the direction of the bladder, turned towards the sacrum, and the ischial tubers, partly withdrawn and again re-introduced.

After this manipulation, we commence the passage of the index of the left hand, following on the same lines as the first. Then the middle finger of each hand, if necessary, though very often but the two indices are required.

By this procedure, when proper precautions are observed, the anus is amply dilated to permit a thorough inspection. The loss, temporarily, of sphincteric contractile power, is manifested by the free escape of feces.

We commence our ocular examination at the verge of the anus.

Questions to be Answered.

1. Has our patient piles? If so, of what type?

2. Are they simple or complicated with fissure, ulcers, abscess of fistula?

3. Has the patient an entire absence of hemorrhoids, and is he rather suffering from a neoplastic infectious malady, as cancer, syphilis, or tubercle, and if malignant, where is its precise seat?

It might be said that it was rather premature to put questions before we have employed the speculum and other mechanical means, as an aid to exploration.

Under ordinary circumstances the less instrumentature in anal examinations the better. Many times the brethren have written me "whose special anal speculum do you recommend?" My answer is that the best is "none at all," in uncomplicated cases. With the sphincter amply dilated—and no speculum should ever be employed until this has been secured, as a preliminary measure; the rectum rolls out, prolapses, and we have under our eyes the entire field of pathological changes.

In those in whom the anus is well stretched, if any sort of speculum is useful, nothing in my hands serves more admirably than a Simon's vaginal, well-warmed and oiled, and very gently introduced. The blade of this instrument being about four inches in length—about one-half the length of the entire rectum, and all that part of the tube which is uncovered by peritoneum—we have at our command a clear sweep of the whole field. With a tampon placed high up, the mucous membrane well drenched and this speculum raised, depressed, or turned anteriorly first, posteriorly second, to the right third, and the left side lastly, a thoroughly complete inspection is always a simple procedure in appropriate cases. Certainly in those whose lower passage is the seat of stricture or malignant disease, this instrument must not be em-

ployed. Indeed, in this class of cases an ocular inspection is quite unnecessary.

HAS OUR PATIENT HEMORRHOIDS, AND IF SO, OF WHAT DESCRIPTION?—Time will not permit the consideration of the diverse variety of piles. In a physical examination, you cannot confound hemorrhoids with other affections. In a young or middle-aged man, or woman, with no pronounced cachexia, before we examine, we may quite assure ourselves of their presence.

ARE THE HEMORRHOIDS COMPLICATED WITH ULCER, FISSURE OR FISTULA?—Hemorrhoids provide the ground-work of the greater part of the cases of ulcers and fissures. So-called fistula in ano is almost invariably consecutive to hemorrhoids. It is mis-named "fistula-in-ano" for the reason that, in the greater part of these cases, the fistula externally appears at some distance from the anal verge, and, internally, starts at a point some distance above the outlet. In fact, they clear the anus altogether, and nowhere in their sinuous path touch it, except in few cases.

With chronic hemorrhoids, then, we must always look for those lesions so ominously consecutive to them. My own observations, in a considerable number of cases, incline one to regard hemorrhoids as an exciting factor in the etiology of epithelioma in elderly people.

IS OUR PATIENT SUFFERING RATHER FROM GONORRHŒAL INFECTION THROUGH RECTAL COITUS, TUBERCULAR ULCERATION, SYPHILITIC HYPERPLASIA, OR A NEW GROWTH OF SARCOMATOUS OR CANCEROUS ORIGIN?—Many an unfortunate has been turned away with a few purgative pills, a pile ointment, or lotion, by the attending practitioner, who never had hemorrhoids in his life, and a mere placebo given for such serious pathological conditions, which, if treated early and energetically, may be arrested at the start; but which when once the work of diffusion and infiltration into the loose cellular tissues, the perineum, the prostate or bladder, the vagina or uterus in the female has begun, we are often limited in our practice to palliative measures, as radical resources are now quite out of the question.

Gonorrhœal-proctitis is often met with in our larger cities. Its onset is sudden, and it is rapid in its destructive consequences. The agonizing straining it occasions is something harrowing. It may advance upward and involve the peritoneum. It may be easily diagnosed by the quality of the discharge and the virulence of the inflammatory changes. Cancer and syphilis, when present in the rectum, in their early stages, are not so easy to determine. We must depend largely on the clinical history, with reference to heredity; pre-existing lesions, etc. If one be in much perplexity, he should give the patient the benefit of the doubt, and put him through a thorough and extended mercurial course. If cancer be diagnosed, however, it is well to always determine, with as much certainty as possible, its precise location and extent, for when it begins near the anal verge, it may be readily and safely extirpated, while, on the contrary, if it be lodged in the rectal walls a finger's length beyond the anus, the case is beyond the reach of art to more than relieve, when we must give a prognosis accordingly.

Tubercular ulceration of the rectum is a much more common malady than is generally supposed.

It manifests itself by almost intolerable itching, nocturnal, tenesmic straining; and a copious emission from the rectum of a muco-purulent discharge. Many of the symptoms common to hemorrhoids attend this malady, so that, unless a special and very careful examination of the rectum be made, one is liable to overlook its real character, and employ temporizing remedies, when, by the use of proper measures, its course may be cut short in almost every case in which there is not an infection of important organs.

THE VARIOUS SURGICAL OPERATIONS FOR THE RADICAL AND PERMANENT CURE OF HEMORRHOIDS.—Having determined the probable presence of piles by such subjective symptoms as leave little doubt as to their true character, or, after verifying, by an ocular inspection, their actual presence, our next concern is to cure them. But let it be clearly understood here, that only in those severe, chronic, refractory cases, should operative measures be advised or practiced; for, of all regions of the body, the ano-rectal is one of the most dangerous for surgical interference, unless special precautions are always observed.

The nerve supply to the rectum is from the pubic and fourth sacral. The sphincter and levator-ani are animated from the same source. The terminal filaments of these freely inosculate with small sciatic, sacral plexus and great sciatic ; the anus is chiefly supplied from the sympathetic. Hence, with its abundant nerve supply, we can readily understand why so frequently in operations in this situation, shock is altogether out of proportion to the extent of mutilation. The immediate operative-mortality in hemorrhoidal operations, at St. Mark's Hospital, London, was but one to 670 operations. Allingham, in 1600 operations, had no deaths.[1] This was much lower than Cripps' or Carding's.

But if the *operative mortality* is low the consecutive pathological lesions and effects on the general system are many in those on whom operations are performed which entail the loss of blood, or mutilation of tissue.

Cripps,[2] in speaking of the consecutive or secondary hemorrhage, says, "There is nothing which so taxes the resources of the surgeon, as in cases of recurrent hemorrhages after operation. The dangers are grave, the patient and friends being powerless in the emergency and are wholly dependent on the surgeon's prompt action."

But supposing the surgeon cannot be found until the escape causes mortal symptoms, or is only controlled when so much has been lost as may forever leave a shattered constitution, the consequences must be disastrous. Hence, those hemorrhoids which admit of a cure without the scalpel, should be treated by such means as will not imperil our patients' lives, or leave the parts favorable to other subsequent lesions.

Surgical Procedures Commonly Employed in Non-Hemorrhagic Hemorrhoids.—Injection, ligation and excision are the most common means resorted to by surgeons until recently. Not long since Whitehead devised an operation which takes his name. Its complete performance always entails a considerable sacrifice of healthy enteric tissue, a large loss of blood and a tendency, on union, of a subsequent annular rectal stricture. When primary union fails, after the operation, an enormous hiatus in the rectum remains, which only heals after a long lapse of time, by a tedious process of granulation.

If it were not for the dangers of secondary hemorrhage, and impossibility of preventing infection of the wound, the complete and radical excision of the masses would be a most satisfactory operation.

Ligation is not as useful as one might suppose. It is quite impracticable in hemorrhoids high up, as well as in those with broad, sessile bases. When the rectum is the seat of active inflammation, or when degenerative interstitial changes in the walls of the hemorrhoid have occurred we can do nothing with the ligature. The range of the employment of ligatures in hemorrhoids is definitely limited, and when employed in selected cases, many cases have been permanently cured.

It is well to note the phenomena by which the evolution to health is effected. The necrotic gangrenous changes in the hemorrhoid often produce a tendency to consecutive fistula at the root of the sloughing tumor.

Injection, directly into the hemorrhoid, of coagulating or caustic substances is another expedient. It is unnecessary to name all the substances which have been employed for this purpose. Suffice it to say that their name is legion. Their *modus operandi* is on the theory of an irritant, mechanical inflammation, with an aseptic shrivelling or resorption and atrophy, which effaces the hemorrhoids. Crystal carbolic acid reduced by heat has met with the most favor ; a drop or two injected into each mass. The operation is simple, but we can readily see that except in distinctly pedunculated piles, this phenating of the inner walls with an escharotic will not avail. In those masses composed of mixed vascular, angiomatous elements, it has no place, and is almost certain to cause future trouble, if resorted to. There are many other operative procedures which are, however, with few exceptions, all derivatives of the three above named.

Hemorrhagic Hemorrhoids, or Bleeding Internal Piles.—A con-

[1] Allingham on the Rectum, p. 127.

[2] Cripps, on Diseases of the Anus and Rectum, p. 110.

tribution on hemorrhoids, it is feared, might be regarded as inexcusably defective, if it did not make some reference to *bleeding piles;* hence, before concluding with the subject of treatment of the non-hemorrhagic variety, this phase of the disorder should be glanced over.

Without entering into the subject of the pathology of this phase of the malady under consideration, at the outset we may ask, assuming that a correct diagnosis has been made, is it always judicious to interfere in those cases in which the loss of blood is not of such frequency or quantity as to make its impress on the general health? My impression is that for those who live on rich food, take insufficient exercise, or manifest a propensity for internal inflammation, an occasional spontaneous rectal phlebotomy, is often most salutary in its consequences.

[1]Montague reports a singularly interesting case, cited to him, by Larrogue.

A mademoiselle, a lady of rank, he says, on approaching the age of puberty was pronounced by skilled physicians, hopelesly ill with pulmonary disease. But her menses coming on, all her lung symptoms vanished. At the age of 44 her menopause arriving, pulmonary symptoms again set in, in an aggravated form. Now, she had a copious hemorrhoidal flux, and perfect health was again restored. These bloody fluxes continued from the rectum, from time to time, till she was 66 years old, when they ceased and the lung symptoms now set in with mortal effect.

Bodson of London, in 1832, reported another remarkable case in the *Lancet* for January of that year, which seemed to strongly confirm Montague's views

He was consulted by a young gentleman of 24 years of age, who had been married two years. He was emaciated, stooped and feeble. Examination of the chest revealed clear evidence of incipient pulmonary disease. Thinking that perhaps the young man had indulged excessively in the conjugal relations, he was ordered to sleep in another bed from his spouse. This, however, had no effect. Now, Bodson remembering that he came from a hemorrhoidal family, determined to try the effect of bleeding at the anus.

With this end in view he applied eight leeches at the verge of the young man's rectum, with the most desirable effect. The cough ceased. He commenced to gain in flesh, and was soon wholly restored to health.

But we will meet cases in which the loss of blood is excessive, our patient's health is shattered, and even life threatened. Such a case was sent to me this past summer, by Dr. Acker, of Croton-on-the-Hudson. She was bleached as white as marble, and bled terribly. Such cases must be promptly dealt with.

If the hemorrhage is small, simple astringents may suffice. If it be excessive, ice must be passed into the rectum, or even digital pressure employed, until the immediate bleeding ceases. Radical and permanent treatment embraces *complete* anal dilatation, the rolling out of the rectum, and thorough destruction of the fungous, mossy masses or papillæ, which occasion all the trouble. The actual-cautery, Paquelins or the galvano, is a sovereign remedy for this condition.

COCAINIZATION, DILATATION AND PRESSURE-MASSAGE AS A RADICAL REMEDY.—Except for bleeding hemorrhoids and those complications previously noted, this therapeutical tripod, employed with the minutest attention to detail, has, in my hands, enabled me to dispense with every sort of cutting operation which entail the loss of blood in hemorrhoids of every description.

The *rationale* of the treatment consists in rigorous asepsis, local analgesia with subcutaneous cocainization, dilatation and pressure-massage.

To my mind, it possesses very great advantages:

1st. In avoiding the loss of blood.

2d. In avoiding consecutive inspection.

3d. In not leaving a condition favorable to stricture.

ADVANTAGES TO THE PATIENT.—1st. The operation is less expensive to the poor, as assistants may be dispensed with.

2d. He may continue at his usual occupation the next day after treatment.

3d. The dangers attendant on pulmonary anæsthetics are entirely escaped, when organic disease is present.

[1]Traité des Hemorrhoides, Fluxes, Hemorrhoidaire, etc.

PREPARATION OF PATIENT AND TECHNIQUE OF OPERATION.—The day before operation the bowels should be well cleared by a saline laxative.

Before operation is commenced, the patient may have a substantial meal.

Before the patient is placed on the table for operation, the colon should be well washed out with sterilized water, and the perineum should be shaved and scrubbed. Now, from two to four ounces of whisky or brandy should be given; and we are ready to commence preliminaries.

The index-finger being introduced into the rectum, the subcutaneous and intrasphincteric injection of cocaine solution (1 to 100) is commenced, making but four independent punctures; but, after Reich's plan, spraying the subcutaneous muscular and cellular tissues, in a *radiated* direction, until the entire annular zone of the anus is analgized. This completes the first stage of the operation. Now, a tampon of gauze is introduced, as high up as the vesico-rectal fold of the peritoneum, and a long, thin fringe of cocainized gauze is passed through the anus, as far as the tampon, and allowed to remain for a moment in contact with the nude mucous membrane, when it is withdrawn. Now anal dilatation is completed. This must be thorough, until all resistance to the distending digits is at an end. The rectum is then thoroughly flushed with sterilized water, when we commence the third and last stage of the operation.

We now, with the index and middle finger in the rectum and the thumb resting externally, against the verge, separately seize the hemorrhoids and violently compress them between the finger and thumb. If they are very large and numerous, then, in order to do the work of compression radically, the intestine should be prolapsed slightly, and each caught and separately emptied of their blood: and have the walls well rubbed together, being alternately compressed and twisted on their bases or pedicles, until we are assured of an active, traumatic inflammation immediately setting in. When there is a large cluster on the outside, in order to make analgesia doubly certain, douche them with a syphon of acid carbonated water, or, in want of these, pour a pitcher of iced water from a height slowly on to them. These are seized and twisted in the interval. The rectum is again flushed and the tampon removed, when an opium suppository is introduced. Now, as the sphincteric power is temporarily crippled, there is an escape of fluid feces, unless we adjust a firm, substantial compress, which, while obstructing them, gives great comfort to the hemorrhagic parts.

When pressure-massage has been thoroughly carried out, there is practically nothing more to do. Consecutive inflammation effectually destroys the endothelial lining of the hemorrhoids; their bloody contents, first coagulating, disintegrate and are absorbed in time, leaving, as a residue, a few scattered atrophied stalks to mark the former site of the hemorrhoidal varices.

For the past two years this has been the procedure which I universally employed in hospital and out of it. The number, during the past year, was unusually large, and, as far as we could follow the cases, or trace them, through the physicians who sent them, the results have, in all cases been satisfactory and the cures permanent.

For the village and country practitioner the method is a most valuable acquisition, commending itself equally for its simplicity, efficacy and permanence of cure.

302 W. 53D ST.

AN IMPROVED METHOD AND NEW INSTRUMENT FOR RADICAL CURE OF HEMORRHOIDS WITHOUT OPERATION.

BY E. WYLLYS ANDREWS, A. M., M. D.,
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THE hypodermic method for the radical cure of hemorrhoids is marvelous in its success in some cases, while in other instances it is so painful, disappointing and disagreeable that nearly every operator learns to shun it, however enthusiastically he may have practiced it for a while.

That this method never can be free from risk of sudden death by embolism, is clear from its very nature and mode of action. Similar injection of naevi, and small varices by coagulant injections, was long ago practiced, with a small but regular percentage of sudden deaths, until it was practically abandoned. A well-known surgeon in Chicago had a child die instantaneously, before a large

class of students, after the injection of a small naevus of the face.

This danger can never be eliminated or controlled. Nine cases of death following hypodermic injection of piles have been collected by the writer, out of four or five thousand operations. In one case, probable embolism of the liver took place. The patient never passed bile-colored stools after the injection, and died in a few months of exhaustion and marasmus. Several cases of abscess of the liver were also reported, and a considerable number of sloughing, severe pain, hemorrhage and local abscesses. This, together with the lack of permanency of the cures, has led many surgeons to avoid the method, and others, like Kelsey, to abandon it after a thorough trial.

I have never entirely abandoned the injections, but have used them when a patient was found strongly predisposed in their favor, after explaining their advantages and disadvantages. Sometimes the results are highly satisfactory. Very recently, an elderly physician who had read my writings for and against the method, called at my office, and wished that it be used on him. He had a single hemorrhoid the size of a hickory nut, continually prolapsing, and at times nearly disabling him. For years he had made a daily practice of seeking a closet to replace it, several times a day, and had had the usual discomforts of such cases. I injected 5 minims of 4 per cent. cocaine into the tumor, and then without removing the needle followed this by 6 minims of 50 per cent. carbolic acid, in glycerine. The patient did not know when the needle was inserted or withdrawn, and was conscious of nothing being done, at all. In two weeks he reported with absolutely every vestige of pile gone. No slough had been known to separate, and no sign of granulating surface appeared. The changes were probably interstitial. It is such cases in the hands alike of quacks and reputable physicians which lead all parties concerned to become enthusiastic over the method. However, disappointments will come, as I have shown, to all who use the injections. It is a significant fact that the inventor of the method, after selling it, as a secret, for years, himself abandoned it for a kind of needling operation which, however, never became popular. (See Andrews' Rectal and Anal Surgery.)

From the partial success of this injection or coagulant treatment we may learn at least one lesson, viz., that to cure hemorrhoids it is essential only to destroy their internal varices, and that their mucous covering will not remain hypertrophied after this is done. The removal of the whole tumor is, therefore, unnecessary, from a surgical standpoint, if any method of destroying the veins alone can be found. The knowledge that destruction of these veins is a painless process, is also a valuable result of experience with injections.

If, then, some means may be found safely to obliterate the varix in each pile, a painless and effectual treatment will be at hand which can offer all the safety of the cautery, ligature or crushing operation, and at the same time will not require an anæsthetic or detain a patient from his business. Such a method, I believe I have found in the application of electrolysis to the destruction and coagulation of the interior network of vessels in hemorrhoids.

My attention was long ago called to the fact that moles and naevi about the face were quite painlessly destroyed by a certain manipulation of the needles.

In removing superfluous hairs by electricity, considerable pain is usually felt, as the current is applied. Where the number is large, I have even found it better to give an anæsthetic, and remove a larger number at one sitting. Accidentally, I discovered that this pain was far less if the electrodes were placed very near together, instead of having one placed in the hand or side of the face. The reason obviously is, that with less resistance interposed, a current of lower tension can be used.

In the case of moles or warts, if two needles connected with the battery poles are placed on oppoite sides of the growth and pressed toward each other, they will rapidly come together, and little pain be felt, while the growth turns black. If one needle only is used, the other pole being a sponge electrode held at a distance, the result on the growth is the same, but sharp, stinging pain is felt during the passage of the current.

In applying such a treatment to hemorrhoids, I therefore seek to pass the two

needle electrodes into a single pile, and to limit the coagulant and electrolytic action to the interior, and have endeavored to use the weakest currents which will produce good chemical action through a resistance of one-eighth to one-half inch of tissue. I may say that I regard the changes produced as purely chemical, exactly such as an injection of acid would produce. The current acts by destroying the life of cells, through its power of decomposing water, and this is nearly what caustics do, whether alkaline or acid, viz.: they destroy tissue through their affinity for water.

I have already stated, what every operator knows, that a needle can be inserted into a pile with little or no pain. A drop of cocaine will make this doubly sure, and a few drops more injected into its center will make the whole tumor insensitive for a moment or two. If then the hypodermic needle could become the negative pole of a battery and a circuit established through the tissue, coagulation and destruction could take place around the needle to a considerable extent, without involving the part containing sensory nerves, or, in other words, the mucous membrane.

My first experiments were made with a hypodermic needle and a syringe electrode, but the operation was not entirely painless, and I found difficulty in preventing the barrel of the syringe from coming in contact with the skin. My current was also too strong, causing more rapid evolution of gas than is needful. The experiment, however, showed me that the method had great possibilities, since I had no trouble in producing a hard coagulum in each pile treated. I noted, also, that there was less immediate swelling than with injections, in fact there appeared to be some contraction. In the hypodermic method, severe swelling and great pain sometimes appear on the second day. This is especially common with weak injections.

The next stage of my experimenting was in the direction of passing both positive and negative electrodes in the form of needles into the center of a pile, using a hypodermic needle as one pole, and making a preliminary injection of cocaine. The result of this was a painless operation and a quicker destruction of the veins, while the current used was only four elements, E. M. F., about six volts, against a voltage of twenty volts in the first case. The anumeter would register slightly higher (10–30 milliamperes) in the latter case, owing to the smaller resistance.

My present form of instrument contains no provision for injecting cocaine, but could be so arranged by making one of the needles hollow. The destructive action of the current very rapidly corrodes any but a platinum needle, and by using fine dental broaches I obtain almost entirely painless puncture. The hollow needle is so much larger as itself to be a little more likely to cause pain. My experience is as yet too limited to determine whether it will be better to rely only on external applications of cocaine. So far I have had little or no pain with the broaches. They corrode very fast, and must be renewed. Theoretically, a fine copper electrode would be desirable for the negative needle, as shown by the hardening and penetrating action of the copper salts with the uterine electrode.

The instrument shown herewith is as simple and practical as I have been able to make it, with my present experience as a guide. For internal deeper piles, a hooded or tubular end, like a speculum, would perhaps facilitate its use.

I have found this method a pleasant and efficient substitute for the hypodermic treatment. On theoretical grounds, I feel warranted in claiming that it will prove safe and that the cures will be permanent. Should clinical experience develop no cases of embolism, or other dangerous complications, I believe the method can do what the hypodermic method has failed to accomplish in superseding all operative measures requiring anæsthetics and confinement to bed.

A CONSIDERATION OF HEMORRHOIDS AND THEIR MEDICAL TREATMENT.

By FRANK S. PARSONS, M. D.
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HEMORRHOIDS may be considered a varicosity of the external or internal hemorrhoidal plexus of veins, from which we obtain the so-called varieties of external or internal piles.

When we consider the position, the

anatomical relations, the structure of these veins, and the customs and habits among civilized countries, it is most remarkable that we have as much freedom from this common surgical affliction as we do.

While searching for the cause of hemorrhoids, we must bear in mind the close connection of these vessels with the inferior vena cava through the internal iliac, the absence of valves in the hemorrhoidal plexus and their close anastomosis with the arterial system.

Then we can the more clearly see why a backing up of blood, or stasis in the circulation through these larger veins may cause dilatation and a varicose condition of the hemorrhoidal ones.

From this ordinary statement one receives a wrong idea of the cause of piles.

We must remember that hemorrhoids do not differ materially in their pathology from varices elsewhere in the system, and when we have a backing up of blood, or stasis in venous circulation about the portal system, or any other trunk of veins, we do not get the condition known as varices from the immediate dilatation and rupture of the ultimate veins of such plexus, but an œdema from diapedesis of serosity forced through the expanded walls of the vessel into the loose connective tissue, sometimes with escape of blood corpuscles. This is demonstrable in the œdema of pregnancy, when the uterus has risen sufficiently to cause pressure on the internal illiac veins.

We do not always obtain varicosities and hemorrhoids in pregnant women, and, if they occur, they are not the result of immediate or sudden pressure, but a distensibility of the walls of the vessels must exist combined with long-continued pressure.

Anatomically in varices we often see thickening of the walls of the affected veins from a connective tissue deposit between the muscle fibers.

Seemingly this does not take place on account of the enormous enlargement of the caliber of the vessels, but in reality such is the result of long continued pressure and diapedesis of wandering cells and their organization into new connective tissue. Therefore, stasis of the circulation is only an associated cause of the piles, where it occurs in the hemorrhoidal plexus, and not the sole cause.

Furthermore, this condition is not a result of one such stasis suddenly attained, but of long-continued pressure where no favorable exit for the blood in the distended veins exists from frequent anastomosis.

Piles are thus often the result of diseases of the heart, kidneys, and liver, where there is interference with the full return of blood through the portal system.

Congestion of the portal system may occur from high living, especially when the free use of alcohol is indulged in, as well as the inactive, sedentary life led by literary men and others; this is prone to the induction of piles.

Hereditary tendencies and cachexia may predispose to hemorrhoids from digestive disturbances and impoverished blood.

Constipation is inclined to produce dilatation and varices in the hemorrhoidal veins, not only from impaction and pressure of fecal matter, but also by the additional tension placed on them by the act of straining at stool.

While it is rare for children to become sufferers from hemorrhoids, yet age is no indication for immunity against the disease; congenital predisposition, and malformation of the viscera may occasion some few cases indirectly.

The symptoms of hemorrhoids are so well known that they would hardly be more than repetition in this place; however, it is well to call attention to the fact that an alarming hemorrhage may take place from an internal pile, which, while bleeding slowly, may cause a collection of blood to considerably distend the rectum before being expelled I have seen this occur to a point of syncope, before the real locality of the hemorrhage was obvious.

The medical treatment of hemorrhoids consists of palliative and curative measures. For it is possible to cure piles without the aid of surgical means. The palliative measures are directed to the relief of pain and controlling of hemorrhage, if any of importance occur.

External piles may be ameliorated by the use of topical applications of ice, opium, cocaine, and other useful adjuvants calculated to reduce the cellular

congestions and relieve the pain, and reduce the size of the tumor. Internal piles may be treated in a similar manner by suppositories and injections, in which various drugs are employed.

A mixture of tannin and opium often controls the hemorrhage of internal piles and relieves tenesmus.

Curative medication should begin by ascertaining the cause of the varicose condition of the hemorrhoidal veins, and its removal, if possible.

This involves treatment of co-existing diseases which may be inclined to produce or aggravate the stasis of portal circulation.

Attention to the diet and regulation of the bowels is of prime importance.

The object of this paper is to call attention to the treatment and cure of piles by absolute rest in bed, with the hips elevated.

This method is so simple, easy of performance, and effective, that the results are often astonishing.

Naturally, most patients object to it, for the time required for the cure of that affection is often wearisome, and unless it is absolutely followed out, the patient is not fully relieved.

The patient should be placed in bed with a pillow under the hips, or the foot of the bed raised so that all downward pressure is taken from the pelvis. It is necessary to keep the patient two or more weeks in bed for effective cure. The diet should be semi-fluid and of easily digested substances.

The after-treatment should consist of such tonics as will favorably act on the muscular coats of the vessels.

THE TREATMENT OF HEMORRHOIDS.

By S. T. ARMSTRONG, M. D., Ph. D.,
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BEFORE entering into a consideration of the different methods of treating hemorrhoids, it will be well to define my position regarding their classification and ætiology. For all practical purposes the old division of hemorrhoids into external and internal is a satisfactory one, though either variety is often associated with the existence of the other. They occur as tumors formed in the mucous membrane of the rectum, near the anus, in either men or women, and their appearance is so familiar that no description is necessary.

Pathologically these tumors have been found to consist mainly of a hyperplasia of the rectal submucous tissue, and of saccules formed by morbid dilatations from the small hemorrhoidal veins. There may be in such tumors a predominance of fibrous tissue, or a predominance of tortuous and dilated arteries and veins. The latter formation is the usual characteristic of internal hemorrhoids, bleeding from which is so frequently the only symptom of their existence. Sometimes there is the rupture of a vein with moderate extravasation of blood into the submucous tissue of the rectum, and consequently there is a localized leucocytic activity, cellular proliferation, and connective tissue organization, such as occurs at any inflamed area.

Numerous causes have been assigned as the exciting factors of hemorrhoids; but in all the conditions that have been mentioned constipation is a prominent feature. The influence of constipation in exciting or perpetuating the hemorrhoidal condition, has by all observers been considered to be, in consequence of the mechanical irritation. But it seems to me that constipation produces another effect that has not, that I recall, been heretofore presented; and this effect is the vasomotor as well as muscular paresis that is produced by the local absorption of the leucomaines contained in the feces. That form of auto-intoxication that has been called stercoræmia exercises its primary morbid influence upon the hemorrhoidal vessels and nerves that results in an atonic condition of the rectum. In consequence of this toxic atony there is an abtusion of the rectum that is evidenced by its insensibility to fecal masses or to fluid injections of various temperatures.

It was acting on this hypothesis that I adopted in 1885 a plan of treatment that has proved to be satisfactory in a large number of cases. A relative, whose vocation as a civil engineer, kept him in regions where medical consultation was only possible by letter, wrote to me regarding the development of hemorrhoids as a consequence of poor cooking and a limited water supply. From the history he gave he had internal hemor-

rhoids; so the first requisite was to empty the rectum daily in order that there might be no prolonged accumulation of feces, and the next essential was to secure a local disinfection. For the first purpose the fluid extract of cascara sagrada was given in doses of a tea-spoonful at bed time each evening. For the rectal disinfection, injections containing 15 drops of carbolic acid in a pint of tepid water were taken after each evacuation. I later heard from the patient that the treatment had relieved the trouble, and directions were given that the rectal carbolized injections be discontinued and that the cascara sagrada be taken at any time that the bowels seemed to be sluggish.

This has proved an effectual cure, the patient reporting to me, early this year, that he had had no further trouble from hemorrhoids. He also stated that during the past seven years he had frequently used this treatment for men under his command and always with success.

During recent years I have modified this method in my hospital and private practice. The employment of the cascara sagrada has been continued in these cases either in the necessary dose of the fluid extract, in pills, in a mixture of the extract of malt with the fluid extract of cascara sagrada, or in the following prescription that I have found very serviceable:

℞—Fl. ext. cascaræ sagradæ, ʒiv.
Glycerinæ c. p., *ad* . . ʒij.
M. et. ft. mistur. S.—One-half tablespoonful at bed-time.

The carbolized injections are made by adding to each pint of tepid water a teaspoonful of salt and two tablespoonfuls of this mixture:

℞—Acidi carbolici, c. p. . . . ʒiiss.
Glycerinæ, c. p. *ad*. . . . ʒviij.
M. ft. m. S.—Poison.

An injection of a quart of fluid prepared in the above fashion should be retained a few moments and then evacuated.

I conceive that this mixture not only acts as a local disinfectant, but that it produces that moderate constriction and anæsthetic effect that carbolized solutions cause when applied externally. Certainly in the general run of patients having a more or less pronounced hemorrhoidal tendency a carefully conducted treatment, as above outlined, will afford relief.

If the patient comes for our advice, and we find an angry-looking, protruding hemorrhoidal mass, a more decided plan of treatment is necessary. Hilton has shown (Lectures on Rest and Pain, Fifth Edition, 1892, page 292), a diagram of the course of the irritation caused by an ulcer on the sphincter ani, conveying the sensation of pain to the spinal cord, and producing upon the sphincter muscle reflected effects that lead to painful contractions. A similar route is followed, and reflex excited, by a protruding hemorrhoid, though the physiology is slightly different. In consequence of straining, there is a temporary extrusion of the mucous membrane covering and just within the sphincter ani; if there is a hemorrhoid in this membrane, it is arrested by the contracted sphincter, while the rest of the mucous membrane is retracted within the anus. The mucous membrane covering the hemorrhoidal mass is made tense, its vessels quickly become engorged, and, in consequence, we have the same reflexes excited as those described by Hilton. Such a patient should have the rectum cleaned out at once by a warm carbolized injection; the hemorrhoidal mass should be cleansed with a five per cent. carbolized solution, and from ten to thirty minims of that solution should be slowly injected into the pile by means of a hypodermatic syringe. The patient should subsequently keep quiet, preferably lying down; and if the hemorrhoid is too large or too painful to replace within the sphincter, compresses, wet with a five per cent. carbolized solution, or with fluid extract of hamamelis, should be placed over it. Either of these liquids greatly relieves the local pain, though in women it is sometimes necessary to administer an injection of morphine. At intervals of three or four days injections of the necessary quantity of a five per cent. carbolized solution should be made into the hemorrhoid until the mass disappears in consequence of absorption and connective tissue formation.

My attention was called to this method of treatment in 1879, by D.. J. R. Weist's report on the subject (Transactions American Medical Association, 1879, Vol. XXX., p. 499). At that time

I was employing carbolic injections in the treatment of buboes and arthritis with gratifying results, and in no instance (except that of buboes) did any suppuration or other untoward accident follow such an injection. It has been my good fortune to have no unfortunate sequence to these injections; and there is no good surgical reason that harm should follow them. Of course it has been the experience of excellent physicians that comparatively insignificant surgical procedures are followed by serious consequences; but I do not believe that this is more frequently the case in intra-hemorrhoidal carbolized injections, than it is in circumcision, or incision of an abscess. Many surgeons will dissent from the extreme prejudice of Dr. Kelsey, who has recently written: "Carbolic acid injections will almost invariably lead to suppuration." My own hospital experience during the past fourteen years, would lead me to say that these injections never lead to suppuration; but it does not seem desirable to make so arbitrary an assertion, and presumably Dr. Kelsey is a careful operator, and suppuration has occurred in his cases. There is no more danger of carbolic embolism than there is of air embolism.

If in these cases in which carbolized injections are employed there is considerable irritability, it will be well to make applications of a two and-a-half or five per cent. ointment of carbolic acid within the rectum. This may be done by means of an ointment applicator of hard rubber, or by means of a flexible tube of carbolized vaseline having a short blunt-pointed pipe that will not injure the membrane.

Where there is reason to suspect the existence of internal hemorrhoids it is best to have the patient take a laxative at bed time and after the bowels are evacuated the following morning to clear the rectum by an injection of tepid water, so that the clean mucous membrane may be carefully examined when the patient is seen by the physician. With men I find the knee and elbow position most convenient for making a rectal examination; with women the lateral position. The physician should first examine the rectum by introducing a well warmed and oiled finger, so that he may discover the location and character of any intra-rectal lesion. After satisfying himself in this regard, the rectum should be exposed by introducing slowly and gently a well warmed and oiled fenestrated rectal speculum. The physician should carefully examine the rectal mucous membrane by means of a head mirror, and natural or artificial illumination. Having located the hemorrhoids the subsequent procedure will depend upon their character.

For small masses the carbolized injections may be employed as above directed. But in those flat, granular hemorrhoidal masses the most satisfactory procedure is an application of Paquelin's thermo-cautery, a procedure that will demand the administration of an anæsthetic. The surface is dried by means of some absorbent cotton wound about a probe, and the cautery, first heated to a cherry red, is drawn over the granular surface, carefully avoiding any injury to the healthy membrane. The results from the cautery are quite as good as those that I have observed from the employment of nitric acid.

In the case of larger hemorrhoidal masses they should be caught in a pile-clamp, the instrument screwed tightly and the mass carefully turned outside of the rectum; the upper portion of the mass should be cut off, and the incised surface seared with the thermo-cautery until the eschar is sufficiently dense to prevent bleeding. Subsequent rest in bed and local treatment should be that usually directed.

There are certain cases in which various causes have contributed to produce a rectum that is pouch-like and that protrudes after each evacuation from the bowels. There is a hyperplasia of tissue and none of the methods above specified will afford anything but a temporary relief. I have performed Whitehead's operation in such cases with relief to the patient. The description of this operation may be found in any of the recent text books of surgery.

No hard and fast rule can be laid down for the treatment of hemorrhoids, because, as in all other diseased conditions, each case should be treated upon its particular merit. Furthermore complications of a fissure, a fistula, or an ulcer may demand different treatment of the hemorrhoid from that that would be adopted under ordinary circumstances. My main

object in this paper has been to call attention to the influence of local irritation in consequence of the absorption of the effete fecal products in perpetuating the hemorrhoidal condition, and the necessity of an antiseptic treatment to relieve this irritation.

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THE TREATMENT OF ANAL FISSURE, OR IRRITABLE ULCER OF THE RECTUM.

By LEWIS H. ADLER Jr., M. D.

[Read before the Philadelphia County Medical Society, November 25, 1892.]

THERE are some general rules that must always form a part of the treatment of anal fissure, to wit: to lessen as much as possible any inordinate action or distension of the bowel, and to prevent the ulcerated surface being irritated and abraded by the passage of hardened feces.

To fulfill these indications enemata or mild aperients should be employed, and the diet must be regulated, the use of bland and unirritating food being enjoined.

It is not possible to point out a diet that would be even generally applicable, as so much must depend upon the state of the constitution and the previous habits of the patient; but in general it should be moderate in quantity, yet sufficiently nutritious—what the stomach can digest with ease, and has no tendency to produce constipation.

The patient should be directed to take moderate exercise; and if the bowels are disposed to be costive, a daily evacuation should be secured by the administration of an enema of warm water, or one of rich flaxseed tea, say from half a pint to a pint, to be given every evening, preference being given to the night time as the patient can then assume the recumbent posture, which, combined with the rest, affords the greatest protection from subsequent pain.

Instead of the enema, or in conjunction with its use, the action of the bowels may be regulated by the employment of some mild aperient, such as the patient has found by experience to agree with him.

All drastic purges should be avoided, as they are more or less stimulating and irritating to the extremity of the rectum. The pain and spasm of the sphincter muscles attending the evacuation of the bowels is best relieved by the use of a suppository consisting of—

℞.—Ext. belladonnæ . . . . . gr. ⅛ to ¼.
Cocain. hydrochlor. . . . . gr. ¼ to ½.
Ol. theobromæ . . . . . gr. x.
Misce et ft. suppositoria j.

One suppository to be employed about half an hour before the enema is given, or a movement of the bowels is expected.

Instead of the suppository, an ointment of extract of conium may be used, as recommended by Mr. Harrison Cripps.[1]

℞.—Ext. conii . . . . . ʒ ij.
Olei ricini . . . . . fʒ iij.
Ung. lanolini . . . . . q. s. ad ʒ ij.—M.

A small quantity of this ointment should be smeared over the parts five minutes before a passage, and again after it has occurred.

The various methods of treating anal fissure may be divided into the *palliative* and the *operative*.

Palliative Measures. — Palliative treatment will meet with success in cases in which the fissure is tolerably superficial and of somewhat recent origin, especially when there is no great hypertrophy of the sphincter muscles.

Allingham[2] states that the curability of the lesion does not depend upon the length of time that it has existed, but rather upon the pathological changes it has wrought. This same authority states that he has cured fissure of months' standing by means of local applications when the ulcers were uncomplicated with polypi or hemorrhoids, and when there was not marked spasm or thickening of the sphincters.

It is essential to the success of the treatment of fissure, especially by local applications, that rigid cleanliness of the parts be maintained; for this purpose the anus and the adjacent portions of the body should be carefully sponged night and morning, and after each stool, with hot or cold water, the temperature being regulated to suit the patient's comfort.

In applying the various local remedies it is necessary first to expose the ulcer to

[1] Diseases of the Rectum and Anus, second edition, London, 1890, page 189.

[2] Diseases of the Rectum, fifth edition, London, 1888, p. 215.

view, and to anæsthetize its surface with a four or eight per cent. solution of cocaine hydrochlorate, well brushed in with a camel's-hair pencil.

The application may have to be repeated once or twice, at intervals of about five minutes, in order to obtain the desired anæsthetic effect.

If any ointment has been used about the fissure, the anus should be subjected to a hot water douche before using the cocaine, as cocaine will not exert its anæsthetic influence on a greasy surface.[1]

Among the different remedies that have been used in the local treatment of fissure of the anus may be mentioned the following: Nitrate of silver, acid nitrate of mercury, fuming nitric acid, carbolic acid, sulphate of copper, the actual cautery, and chloral hydrate.

Of these topical applications the nitrate of silver is the best. Its effects are various: it lessens or entirely calms the nervous irritation, which is so important a factor in producing spasmodic contraction of the sphincters; it coats and shields the raw and exposed mucous surface by forming an insoluble albuminate of silver; it destroys the hard and callous edges of the ulcer, and tends to remove the diseased and morbid action of the parts.

The form in which the salt is usually employed is in solution (from ten to thirty grains to the ounce). The stick caustic may be also used.

To accomplish the best results, the solution should be used once in twenty-four or forty-eight hours, according to circumstances. It may be applied by means of cotton attached to a silver probe or to a piece of wood.

The application is made by separating the margins of the anal orifice with the thumb and index finger of the left hand, and introducing into the anus the probe charged with the solution. The argentic nitrate is to be applied to the fissure only; a few drops are all that is required. If thorough local anæsthesia has been induced by the use of cocaine, the application of the silver salt produces little, if any, suffering, for by the time that the anæsthetic has lost its effect, the otherwise acute pain of the nitrate of silver will have passed away.

After each application the part should be smeared well with an ointment of iodoform (thirty grains to the ounce). The odor of that drug may be disguised by the addition of a few drops of the attar of roses. Iodol may be used instead and in the same way, but I prefer the iodoform, owing to its anæsthetic qualities. After the ulcer has been touched once or twice with the silver solution the effect will be, in the cases that are benefitted by this treatment, a considerable mitigation of the pain from which the patient suffered when at the closet and afterward, and the sore will present a healthy, granulating appearance, and will slowly contract in size.

Some authorities speak highly of the use of acid nitrate of mercury, fuming nitric acid, carbolic acid, the actual cautery, etc., but their employment, with the single exception of carbolic acid, is attended with more suffering than follows the use of the nitrate of silver or the simple operative treatment presently to be described. Furthermore, the application of these remedies is not so certain to effect a cure as either of the two procedures just mentioned.

The daily introduction of a full-sized bougie made of wax or tallow, will sometimes act beneficially in cases of fissure by stretching the sphincter and producing such an amount of irritation as will set up a healing process in the ulcer. An application of cocaine or belladonna ointment should be made to the part previously to the employment of the bougie.

In children and young persons, unless a polypus or a polypoid growth, or a congenital contraction, complicates the fissure, it is almost always curable without operation. In children suffering from hereditary syphilis, numerous small cracks around the anus are common, and they cause much pain. Mercurical applications and extreme cleanliness soon cure them, but they will return from time to time unless anti-syphilitic medicines be taken for a lengthened period.[1]

Operative Treatment.—If, after a fair trial of the simple measures that have been recommended, the fissure does

[1] W. P. Agnew, M.D.: Diagnosis and Treatment of Hemorrhoids, etc., second edition, San Francisco, Cal., 1891, p. 91.

[1] Allingham, op. cit., p. 213.

not heal, or if, as described by Allingham,[1] the base of the ulcer be gray and hard, and if on passing the finger into the bowel the sphincter be found hypertrophied and spasmodically contracted, feeling, as it often does, like a strong india-rubber band with the upper edge sharply defined, or if there should be a polypus, polypoid growth, or any other complication, local treatment will not effect a cure and operative interference will be rendered necessary.

There are three methods of repute to be considerd in this connection; incision, forcible dilatation, and a combination of these two procedures, viz.: dilatation and incision.

Incision. A fissure can be cured by making an incision through the base of the ulcer and a little longer than the fissure itself, so as to sever all of the exposed nerve-filaments and muscular fibres along the floor of the ulcer. In a certain proportion of cases this operation will meet with success, but it is not so certain and radical as the third method to be described.

It has the advantage over the other two operations, however, of being nearly or entirely painless under local anæsthesia produced by cocaine, and, therefore, when general anæsthesia is contraindicated, or is refused by the patient, this method is worthy of trial.

Forcible dilatation. This is the operation recommended by Recamier, of Paris; Van Buren, of New York, and others.

It consists of the introduction of the thumbs into the bowel, back to back, and then forcibly separating them from each other until the sides of the bowel can be stretched as far out as the tuberosities of the ischia. It is well to place the ball of one thumb over the fissure and that of the other directly opposite to it, in order to prevent the fissure from being torn through and the mucous membrane stripped off. As pointed out by Allingham,[2] it is well to repeat the stretching in other directions until the entire circumference of the anus has been gone over. In this manner, by careful and thorough kneading and pulling of the muscles the sphincters will be felt to give way, and will be rendered soft and pliable. This procedure should always be practiced with the patient thoroughly under the influence of an anæsthetic, and it should occupy at least five or six minutes. The operation is a perfectly safe one, but as it is no less severe than the method by incision, and as it fails to effect a cure in some cases, I can see no advantage in adopting it instead of the more satisfactory and always successful plan of treatment—combined dilatation and incision. It may be found preferable, however, in some cases on account of the prejudice of patients against the use of the knife.

Rapid forcible dilatation for the cure of fissure is a method now tried by some surgeons and *apparently* with a fair measure of success.

The patient is placed under the influence of nitrous oxide gas, and the sphincters are quickly stretched either by manual force or else with instrumental power. For my part, I do not see how a satisfactory dilatation can be accomplished in this way. When the cure of fissure by dilatation is attempted under ether-anæsthesia—the muscular system being completely relaxed—the thorough paralysis of the sphincters occupies several minutes before they are felt to yield, and the strain upon the operator's thumbs incident to the operation, becomes very tiresome, to say the least.

With anæsthesia produced by nitrous-oxide, we obtain a suspension of muscular action, but no general muscular relaxation ; hence, to suspend the function of the sphincters to such a degree as to remove the cause which prevented the healing of the ulcer, viz. : the constant motion of the muscular fibres, we must exert a force which would be both detrimental and dangerous to our patient's welfare. Therefore, I cannot believe that this plan of treatment will be commended by the conservative surgeon.

Dilatation and incision. This method I believe to be a radical and unfailing cure for anal fissure, if skillfully and carefully performed. The following are the details of the operation : The bowels should be thoroughly cleansed by the previous administration of a dose of castor oil and an injection : after which, under ether-anæsthesia, the sphincters should be dilated in the manner previously described.

[1] Op. cit., p. 217.
[2] Op cit., p. 226.

The resulting hyper-distention of the anus not only affords rest to the parts, by the temporary paralysis of the muscles, but also, as pointed out by Van Buren, it stretches the sensory nerves of the anus, so that they cease for the time being to convey impressions, the result of irritation, to the nerve fibres exposed in the floor of the ulcer; in the same way that we find forcible stretching of the sciatic and the sensory branches of the fifth nerve, relieves neuralgia.

Mr. Charles B. Ball[1] states that this theory of the temporary cessation of the function of the sensory nerves following the hyper-distension of the bowel receives considerable support from the fact which is frequently observed, that the first time the bowels move after the dilatation there is entire immunity from the pain which before was so severe.

The first step in the operation being accomplished—the dilatation of the sphincter—it will enable us to obtain a complete view of the lower end of the rectum and the exact limits of the ulcer. The fissure is now kept exposed by the fingers of the left hand, and a probe-pointed bistoury is drawn through its base, from within outward so as to incise the subjacent muscular fibres at right angles to their course. It is well to begin the incision a little above, and to end it a little below the ulcer, so as to insure its being carried quite through the sore.

Another method is that advocated by Mr. Syme, and is performed by transfixing the ulcer beneath its base with a small, sharp-pointed, curved bistoury, and cutting from without inward. This procedure endangers wounding the opposite side of the bowel unless it is protected.

The subcutaneous division of the sphincter, as recommended by some authorities, is not a satisfactory method, and is mentioned solely for the purpose of condemnation. It is not only uncertain in its results, but it is also painful, and in more than one instance has been followed by abscesses.

In cases in which the fissure is situated in the median line of the rectum, either anteriorly or posteriorly, care should be observed in making the incision, for the reason that wounds towards the coccyx split and separate the fibres of the external sphincter only, and are difficult to heal, while anatomical considerations will deter us from using the knife freely anteriorly; in the male from the bulb of the urethra being in close proximity, and in the female the shortness of the perineum, and the knowledge that division of the anterior fibres of the sphincter in women is so frequently followed by incontinence of feces

After any of these the patient should keep the recumbent position, and it is better to confine the bowels with opium, at least for the first forty-eight hours. After three or four days a laxative, followed by an enema, may be given, from which time daily alvine movements should be secured. In seven or eight days the patient can begin to move about, but for at least two weeks he should avoid standing too long on the feet. No dressing is required, except a small quantity of iodoform, which should be dusted over the ulcer, and the parts should be bathed well with warm carbolized water, night and morning, to remove offensive discharges.

Peroxide of hydrogen (Marchand's) may be used instead of the carbolized water.

In the majority of cases of fissure, healing progresses with great rapidity, but occasionally, after the wound has healed to a certain extent, healthy action stops, and the appearances of an anal ulcer are again produced. Should this occur, it will generally be found that some complication has been overlooked, such as a fistulous passage running from the ulcer beneath the mucous membrane of the bowel.

The presence of such a passage might be suspected, if the discharge from the part is out of proportion to the size of the ulceration.

Another complication consists of a small hypertrophied tag of membrane, or polypoid growth, situated at the base of the fissure, or on some other portion of the rectal wall.

The removal of these complications will aid the patient's recovery.

[1] The Rectum and Anus, p. 136.

[1] T. J. Ashton: Diseases, Injuries, and Malformations of the Rectum and Anus, etc., second American from the fourth English edition, 1865, pp. 49, 50.

[2] Mr. Harrison Cripps: op. cit., p. 190.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

WILLIAM F. WAUGH, A. M., M. D.,
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PHILADELPHIA, DECEMBER 10, 1892.

WE herewith present to our readers one of our best special editions. Every article is practical and is written by men whose opinions are valued by the profession. Week after next we send out a second "Typhoid Fever" number, with a number of valuable articles. On December 31st, the journal will be devoted to the treatment of pulmonary phthisis. It would be difficult to select three more interesting subjects for the general practitioner. Rectal affections are very common, and very much neglected. Hence comes the success of quacks, like the Brinkerhoff and similar enterprising exploiters. Nothing but the universal neglect of rectal cases by regular physicians can account for the popularity of those illiterate vagabonds, who swarmed over the country, with their little syringes, injecting every perineum that was exposed to them with scarcely a pretense of the knowledge that would entitle one to treat rectal diseases. Still we believe these people did some good by arousing the profession to a sense of its shortcomings. We hope so, at least. The number of papers collected for this number is so large that several have been laid over for next week; among them two excellent papers from the Philadelphia County Medical Society, upon rectal diseases.

* * *

As many thousands of extra copies will be distributed during this month, we look for a material increase in our subscription list. We expect the hearty support of the medical profession, and propose to earn it, by issuing during the year fifty-two numbers of the TIMES AND REGISTER, each equally as good and *useful* as the present one. During 1892 we issued special numbers devoted to diphtheria, pneumonia, cholera infantum, typhoid fever, cholera, gonorrhœa, resorts for consumptives, Summer health resorts, etc. Of these, scarcely a copy remains in our files, so great has been the demand for them, while many applications we have been unable to fill. Would it not be wiser to subscribe for the journal and get all the special issues without taking any chances? We have now in preparation numbers devoted to gleet, surgical appliances, medical education, affections of the eye, ear, nose and throat, as treated by the general practitioner, rheumatism, croup, whooping cough, etc., etc. At the same time whenever any affection threatens to become epidemic, as cholera did last summer, we are ready to make it the subject of a special number. From the growing interest in these issues we believe we can safely promise our readers that the coming year will give them a better journal than in the past. We now issue the cheapest medical journal in the United States; it is our determination that it shall also be acknowledged to be the most useful.

Letters to the Editor.

HEMORRHOIDS.

EDITOR TIMES AND REGISTER: I prefer now the clamp and cautery to all other surgical methods for the radical removal of circumscribed hemorrhoidal tumors. Where there exists a condition that is sometimes found, in which no distinct hemorrhoidal tumors are seen, but instead a general varicose condition of the whole circumference of the lower rectum, Mr. Whitehead's operation is undoubtedly the correct surgical procedure.

GEO. H. KIRWAN, M. D.

12 SOUTH WASH ST., WILKESBARRE, PA.

VESICAL IRRITABILITY.

PLEASE pardon me for intruding on your time in this manner, but I have a case, that though seemingly simple, yet is one which I do not understand. My patient is a little girl about four years old. She has been troubled about one year with her bladder. Almost every day during the day, and at nights, sometimes, she has a constant desire to pass her water. She does not have incontinence.

If she has diarrhea, or a cold in the head, her urine does not bother her. I cannot arrive at a satisfactory explanation of this case. She seems quite healthy, well nourished, urine apparently normal, possibly too acid.

Have tried various remedies, nearly all seem to benefit her while taking them, but the result is not permanent. An answer will greatly oblige,

JNO. A. BRYANT.

WEST POINT, ILL.

[The case is incomplete. Has the child uric acid or the eczematous diathesis? In the first place, an attack of catarrhal inflammation might relieve the bladder temporarily. Secondly, a retrocedent eczema is quite rarely followed by genito-urinary irritability. It would be well to examine the vagina and urethra, and even the bladder, as there may be a calculus. If no local cause is to be found, look to the digestive organs, and see if there is not an indigestion of starches, or an over-eating of albuminous food. If so, the regulation of the diet, maltine, hydrochloric acid before meals, and a little salicylate of soda, are the remedies to be selected. If no such cause can be detected, the irritability may be relieved by salol or benzoate of lithia with belladonna.—ED. T. & R.]

SUGGESTIONS FOR SPECIAL ISSUES.

IN reference to my choice of subjects for special numbers of THE TIMES AND REGISTER, I would suggest Pertussis, Membranous Croup, and Cerebro-spinal Meningitis, in the order in which I have named them.

A. N. SPURGEON.

KOSSUTH, IND.

[We hope our readers will imitate Dr. Spurgeon, and tell us what subjects they desire to see treated in the special numbers of the coming year. If each one will inform us what he prefers, we will take pains to secure the materials from the best available resources, beginning with the subjects that are requested by the greatest number.—ED. T. & R.]

THE ATMOSPHERIC TRACTOR.

PLEASE tell me if you know whether the Atmospheric Tractor and Uterine Safety Tube advertised by P. McCahey, M. D., of 1413 South Tenth Street, Philadelphia, are any good, and whether you consider them useful instruments in obstetrics.

C. C. GENTRY.

ELKTON, VA.

[The Tractor I have occasionally employed with advantage; of the Safety Tube I cannot speak from experience.—ED. T. & R.]

IODOFORM VERSUS ARISTOL.

EVER since the custom of using iodoform has been in vogue, I have almost always, until a little more than a year since, used this "antiseptic" as a wound protective.

I never felt, during this long period of time, in which I have used this remedy thousands of times, that I ever got results that would warrant one in so persistingly following out the dictates of modern surgical notions, unless it is that in this remedy we have a "stink that outstinks any other stink," which was said to be the great desideratum in the vain endeavors of those who believed that it was from without (the surrounding atmosphere) the poison coming in contact with raw surfaces, brought about the condition which prevented primary union by wound infection, and thereby causing sloughing, local and even general systemic infection—sepsis.

I adhered, however, blindly I may say, to the teachings of the many, and con-

tinued the use of iodoform, not however, that I had the least confidence in the drug as an antiseptic or protective, as I had given wounds other protections which I considered of paramount importance.

The dressings which I have used in the way of absorbent dressings were gauzes, absorbent pads, and bandages such as were introduced to the profession by the late Mr. Sampson Gamgee, of England, and to the bandages and their proper application I must give a very large amount of credit for the attendant success in obtaining primary union in wound dressing.

I fully believe that most wounds, irrespective of their cause, whether from the surgeon's knife, the crushed wounds from machinery, wounds caused by fractured bones protruding through the soft parts, railroad and gunshot wounds, or other forms of injury, may mostly be made to heal primarily, by the proper application of pads of absorbent materials, and by bandages properly applied, after the fractured bones have been adjusted, and the sides of the wounds of the soft parts, regardless of how they were caused, have been properly brought into apposition by means of sutures and other forms of retentive dressing; and this, mark you, without the use of any antiseptic material whatever except plenty of water, which is a most reliable remedy to bring about an aseptic condition of any wound; and we are thus furnished an antiseptic remedy, *par excellence.*

I have always regarded iodoform as being at least harmless, but in due time a number of cases of systemic infection, produced by the absorption of poisonous quantities of the drug, occurred in my practice, and I was compelled to change my views. The symptoms of one of these cases, I related in the issue of the *N. Y. Medical Journal*, bearing date April 26th, 1890.

The other cases were equally annoying, and I stopped the use of the drug entirely, except where I was operating for other physicians who felt that iodoform was the very "balm of Gilead."

In those cases I reluctantly peppered the spot with the odoriferous material.

At the time aristol was first brought to the notice of the medical profession, after considerable wrangling for and against the use of antiseptics of any kind or nature, I was persuaded to try a sample package of it.

I very soon became anxious to try the remedy, for in opening the package I recklessly disturbed the contents and emptied them over portions of my clothing, and the manner in which the preparation stuck to my garments led me to conclude that its adherent virtues would at least make it a very reliable remedy as a protective.

The principal advantage I found at that time was the entire absence of any disagreeable odor.

(This absence of odor makes the aristol far superior to the iodoform as an elegant dressing).

On the following day I removed a cancerous mammary gland from a patient, in whom it was necessary also to open up the axilla to remove the diseased contents therefrom. Drainage tubes were placed; the extensive wound surfaces dusted with aristol; the edges of the wounds approximated by continuous suture; and the entire line of wound approximation again dusted with aristol; and then large pads of absorbent material were placed over the wound throughout its entire length through which the drainage tubes were then passed. The dressings were retained in position by carefully placed bandages, and by means of them the arm of the affected side was put at rest. In twenty-four hours these bandages were removed to enable me to withdraw the drainage tubes, which was done without disturbing the dressings proper, and then the bandages were re-applied, and the parts were not further disturbed until the eighth day following, when it was found that primary union had taken place throughout the entire extent of the wound. The aristol was found to have made a most excellent protective along the line of union, acting very much like a light gluey material.

This experience encouraged me very much, and since then I have resorted to the use of aristol in the dressing of all wounds or lacerated surfaces, whether on the exterior surface of the body, or in the cavities of the body, as in diseased conditions of the nasal cavities, the ear, the vagina, and the lacerated conditions of

the cervix uteri, after the repair of which I have always dusted the sutured parts most thoroughly with aristol.

In all operations about the anus and in the rectum, especially in the ligation, or after removal by cautery, of hæmorrhoids and in fistula and fissure, I have found this remedy of great value. In diseased conditions of the female urethra, more particularly cystitis, in dressing the wound made by Dr. Emmet's buttonhole operation, for the relief and treatment of such conditions, I have found that aristol gives a perfect protection from the irritating effects of the urine, to the line of the union made by the approximation of the mucous edge of the urethral lining to the vaginal edge of the wound. I have found that patients treated by dusting aristol over these wounds after the operation and before each act of urination, suffered much less than those whom I have treated after the manner taught by Dr. Emmet, viz.: that by the application of the cerate of impure carbonate of lead, or other form of fatty substances.

In all of my cases of both internal and external perineal urethrotomy and in all cutting operations for removal of stone in the bladder, I find aristol to be of additional value to the other generally recognized principles of wound protection in such like surgery.

In two cases of supra pubic cystotomy, one for the removal of stone, the other for the relief of symptoms, due to an enormously enlarged prostate, by cutting off the encroaching middle lobe by means of Gœlet's new prostatectomy scissors, I found that in spite of the drainage instituted byTr endelenburg's "T" drainage tube, thewoun d surfaces were overflowed by urine in the spasmodic efforts of the bladder to rid itself from the foreign effects of the drainage tube.

In the first of these two cases I found that the aristol gave perfect protection to the parts from the irritating effects of the urine and the wound soon healed without any infiltration of the surrounding cellular tissue.

In the second case I united the edges of the bladder wall to the edges of the skin, as originally recommended by Emmet, in his method of vaginal drainage of the bladder for the relief of cystitis.

The parts were then thoroughly dusted with aristol, and further protected by other dressings.

The central line of union as necessitated by the closure of the incision likewise the elliptical line made by the folding in of the cutaneous edge of the wound to meet the bladder edge, soon healed without sloughing or any other evidence of tardy union.

The aristol is still used by the patient to protect the parts from scalding effects of the urine, which he soon feels if he is careless about application.

In this case, as has been my custom since using aristol, I anointed with aristol ointment in vaseline, the wounds used to retain the normal calabre of the diseased penile urethra. This calabre was obtained at the time of the operation by Otis' method of internal dilating urethrotomy, and afterwards by a process of gradual dilatation by sounds of the strictured deep urethra, passing over the cut surface of the prostate.

I find that by the this use of aristol, wounds made by internal urethrotomy, and indeed all other wounds so treated, cicatrize with great rapidity.

In connection with this I will add that after a recent operation in which I crushed for stone, the bladder tenesmus and disuria were out of all proportion to the violence, which was moderate, used to crush the stone and remove the debris.

The patient suffered extremely,nothing giving relief, until I carried down to the bruised surface of the prostate by means of Reginald Harrison suppository carrier, a suppository composed largely of aristol. Within an hour after this application the patient received complete relief.

The powerful effects of aristol, to produce rapid cicatrization, in which large extents of ulcerated or wound surfaces are exposed, led me to resort to what I have long believed to be the ideal operation for the relief or possible cure of malignant disease when situated in the female mammary gland. This operation is the total ablation of the breasts by cutting wide of the mark, so to speak; in other words, going beyond the limits of the gland boundary with its accompanying fat and then allow the wound to heal by cicatrization without any attempt at bringing the parts together by means of sutures, the introduction and tension of which

both tend to defeat the sought for end. So in my last six operations for removal of the breast I have been following out this method and have by the aid of aristol met with astonishing results. I will give one case as an illustration, Miss —— aged thirty-three, suffering from cancer of the right breast, a cystic sarcoma of great size. She first consulted me at my office. She was suffering intense pain, due to tension of the parts. The peculiar appearance at first sight, suggested a deeply seated or sub-mammary abscess, lifting the breast forward. Upon examination and from the history of the case, I soon determined the nature of the growth. I at once, of course, recommended the removal of the breast and the contents of the axilliary space, which were likewise extensively involved. She agreed to the operation, and stated that she would return the day following, that I might appoint a day for the operation. This, however, she did not do. Several days afterward I received an urgent message asking me to go to her house as she was too ill to come to me. I found her in a state of intense misery. The parts were much more tense than when I had last seen her and there were several slight scars over different portions of the mass, which I at once recognized as the results of the efforts of some one to obtain pus. My suspicions were verified by the woman informing me that such was the case. She was now suffering from a condition of marked sepsis, probably due to the introduction of a non-asceptic needle.

I informed her that for the present her condition would not warrant operative procedure, and that before the operation her present symptoms must be relieved. This I succeeded in doing by repeated full doses of salol, morphia hypodermically with local application of an inunction of a twenty per cent. icthyol ointment in lanoline. At the end of a week she was free from fever but in a very depressed condition. I determined, however, to give her an only chance, and proceeded with the operation. I rapidly removed the entire breast, by a clean circular sweep of the knife, held in the left hand, beginning at the interior border of the large pectoral muscle, thence beneath the gland, keeping fully an inch outside of the extreme border, around the sternal portion of the proposed line of incision, thence above the breast back to the starting point. This incision went down through the pectoral fasciæ, which now with the gland, was quickly removed. The incision was now prolonged up through the axilla, to the biceps, following the line of the pectoral muscle. The entire diseased contents of this space were carefully, but as quickly as possible removed. The axillary space was thoroughly douched with hot, distilled water, as was the entire wound surface. The haemostats used in controlling the hemorrhage were removed, and a perfectly dry wound was now to be seen. The only suture used was a continuous one of asepticised silk which was used to retain in apposition the edges of the axillary incision. The cavity thus formed was filled with moist gauze, covered with aristol. No other form of drainage was used. The extensive wound surface, left by the removal of the gland, was now thoroughly dusted over with aristol, and further protected by gauze pads and absorbent cotton, which were retained in place by systemic bandaging, holding the arm, fore-arm, and the pectoral muscles at rest. The operation was neither attended with nor followed by any shock. The dressings were not disturbed until the eighth day, the patient during this time, being perfectly comfortable. When the dressings were removed, it was found that the axillary line of union was complete. The gauze packing was removed from the axillary space, the continuous suture was removed, and the united parts were allowed to fall into place. The breast surface had healed to a surprising extent and was perfectly free from pus as was the axillary space. The wound was redressed, first dusting over with aristol, and then not disturbed for another week, when it was again removed, this time in the presence of Dr. George H. Kirwan, of Wilkes-Barre, who was one of the assistants at the operation, and had now come to see to what extent the wound had healed. Dr. Kirwan, as well as myself, was greatly pleased, and expressed considerable surprise that in so short a time such an extensive cicatrization could have taken place. The wound was dressed weekly until it had entirely cica-

trized, which result was obtained in about eight weeks. During the redressing of this wound, there was no pus to be seen, with the exception of a light coating of so called granulation pus. The results which I have obtained in the use of aristol as a protection to wounds and ulcerated surfaces, and also as a stimulation to granulation, have been satisfactory to an extreme degree.

In all my cases of abdominal surgery I now use aristol and find it to be the ideal protective, having had no cases of breaking down of the wound made for the purpose of entering the abdominal cavity such as I have had happen in several cases where I have used iodoform.

RICHARD H. GIBBONS, M. D.
SCRANTON, PA.

The Medical Digest.

ANAL ABSCESS.—Reclus treats these as fistulas. Having opened the abscess, he introduces a channeled sound, to the highest point of the cavity, perforates the rectalmucora, and brings the sound out at the anus; the tissues being then cut through. Since it is necessary to produce a fistula, the abscess should be treated as a fistula at once.

ANAL FISTULA.—Do not operate on any fistula that can be tolerated. Make the clothing loose, the stools soft, and enforce cleanliness. After each stool, insert a suppository compound of iodoform, gr. jss.; ext. belladonna, gr. ⅓; and cocoa butter. This should also be inserted on going to bed. The reconstituent treatment consists of the use of bromides with iron:

℞—Potassii bromidi, gr. cl.
Ferri ammonio-citratis, gr. vijss.
Syr. aurautii amar. corb, ℥iij.
M.S.—A dessertspoonful morning and evening
—*Félix Guyon.*

RECTAL CANCER.—In certain forms, when the cancer progresses very slowly, and does not completely obliterate the bumen of the bowel, administer purgatives, prescribe lavages of the intestine, and a vegetarian diet. In these cases, the antiseptic medication is applicable, and permits the patient even to grow fat, and to live relatively very well, considering the lesions present.—*Dujardin-Beaumetz.*

HEMORRHOIDS.—Above all, prevent purging. Diet is essential, with an active life and avoidance of constipation; not by drastics, that increase the evil, but by laxatives, such as castor oil, sulphur alone or with cream of tartar, or magnesia in doses of 7½ grains every morning.

If there be intense congestion, or hemorrhage, enjoin rest in the horizontal position, and internal astringents. There is good reason in employing cold enemas, given without violence. Hobenemas are also useful, as hot as can be borne, repeated many times daily; they afford a notable and enduring relief. If these means fail, dilate the sphincter with thumbs or speculum.—*Potain.*

In acute cases, give hamamelis internally. From the first day the engorgement is lessened, the pain disappears, and the hemorrhoids shrink. When resolution has been obtained, continue the drug for a month.—*Dujardin-Beaumetz.*

℞.—Ung. Populii. . . . . ℥i.
Cerat. plunbi, ... ℥ijss.
Antipyrin, ... gr. xlv.
Ext. belladonnæ, ...
Ext. opii, ... aa gr. xv.

Misce bene.—S. Anoint the hemorrhoidal tumors if painful but not discharging, or after the hemorrhage has ceased. Daily enemas, to prevent constipation.—*Andhoni.*

EXTERNAL HEMORRHOIDS.—Anæsthetize the skin and mucous membrane with cocaine, applied on cotton. Pass a finger into the rectum, and inject six times, half a syringeful of cocaine solution, 2 per cent., between the mucosa and the cellular tissue around the rectum, avoiding the veins. When complete anesthesia has been produced, introduce a speculum and dilate the sphincter.—*Reclus.*

HOW TO DILATE THE SPHINCTER ANI.—Anesthetize the patient with nitrous oxide or bromic ether. Introduce the thumbs and dilate firmly, to the full extent. Go round the anal margin, repeating the dilatation until every part of the sphincter has been completely dilated

and paralyzed. This is to be done in cases where the sphincter is hypertrophic and in a spasmodic state of contraction, perhaps tightly constringing a protruding hemorrhoid.

PRURITUS ANI.

℞.—Hydrargyri chloridi corros., gr. ij.
Acidi hydrochlorici, . . . gtt., x.
Aquæ, ... ℥viij.
M. S. Apply locally, lukewarm
—*Laplace.*

℞.—Argenti nitratis, ... gr. xx.
Aquæ, ... ℥j.
M. S. Paint over itching surface.
—*Bartholow.*

℞.—Cocain. hydrochlorat, . . . gr. v,
Lanolini, ... ℥j.
M. S. Apply locally, after washing with warm water.
—*Besnier.*

℞.—Acidi carbolici, ... gr. vj.
Aquæ, ... ℥j.
M. S. Apply thrice daily.—*Heath.*

℞.—Benzoini, pulv. finiss., ... ℥j.
Hydrargyri ammonial. . . . ℥ss.
Lanolini, ... ℥j.
M. S. Apply twice daily. Avoid coffee, malt liquors, sugar and excess in meat.—*Waugh.*

. . THE . .

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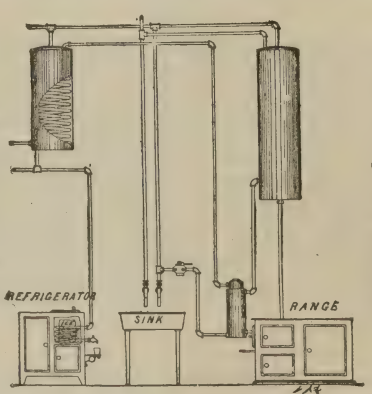

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DR. BRUSH'S

KUMYSS

"KUMYSS is, among the Nomads, the drink of all children, from the suckling upwards; the refreshment of the old and sick, the nourishment and greatest luxury of every one."—DR. N. F. DAHL'S report to the Russian Government, 1840.

I WOULD also allude to cases of diarrhœa and vomiting and of indigestion dependent on nervous disturbances during the later months of pregnancy. I had two cases during the past summer, both were rapidly declining in strength; they failed to be benefited by remedies suggested by other physicians, as well as myself, until they were placed on KUMYSS, when the improvement was rapid and permanent. Very truly yours,

ARCH M. CAMPBELL, M. D.

Farm and Laboratory,

Mt. Vernon, N. Y.

The Times and Register.

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PAGE

ORIGINAL ARTICLES:

THE TREATMENT OF HEMORRHOIDS. By John B. Deaver, M. D..... 649

THE TREATMENT OF ISCHIO-RECTAL ABSCESS AND FISTULA-IN-ANO, By Henry R. Wharton, M. D..... 651

EDITORIAL:

DIPHTHERIA AND PSEUDO-DIPHTHERIA 658

ANNOTATIONS..... 659

LETTERS TO THE EDITOR:

Convenient Remedies from Field, Garden and Kitchen. *Louis Lewis M. D.* 660

Impotence Following Typhoid Fever. *R. H. G. Rhea, Jr., M. D.*..... 665

PAGE

How to Cure Gleet. *R. L. Allen* 665

A Possible Electrical Treatment for Cholera. *S. V. Clevenger*..... 665

SOCIETY NOTES:

The Clinical Society of Maryland.....666

MEDICAL DIGEST:

Hernia—Cancer, an Infectious Miasmatic Disease (*Francois Hue*)—Does the Prevailing Method of Hydrotherapy Need Reform (*Deutsche Medizinal Zeitung*)—Erythromelagie (*Prager Medicinische Wochenschrift*)—Clinical Forms of Pernicious Cholera, During the Epidemic of 1892 in Paris (*La Medicine Moderne*) 668-672

NOTES AND ITEMS.....iv, x

THE TREATMENT OF HEMORRHOIDS.

BY JOHN B. DEAVER, M. D.

[Read before the Philadelphia County Medical Society, November 23, 1892.]

IN opening the discussion upon the treatment of hemorrhoids I will confine the few remarks I have to make to what I consider the most essential points, and first a word as to the formation of this form of tumor and its varieties.

To understand the origin of piles we must be familiar with the arrangement of the veins of the rectum. The hemorrhoidal veins number three—the superior, middle, and inferior. The superior empty into the portal system, while the middle and inferior empty into the general venous system. In the upper part of the rectum they are arranged longitudinally, while below they are arranged circularly in the shape of a plexus, the hemorrhoidal, situated between the mucous and muscular coats. As the hemorrhoidal veins are destitute of valves, also owing to the office of the rectum and to the erect position, these veins are very liable to become dilated and varicose.

To speak of a dilated and varicose condition of the veins in themselves constituting a hemorrhoid is a mistake. The first step in the formation of a hemorrhoid is a dilated and varicose condition of the veins, I admit, but, in addition to this condition of the veins, there must be associated with it inflammatory exudate.

Hemorrhoids are divided into three varieties—external, internal and intero-external. Hemorrhoids which protrude at stool, and are capable of being replaced and retained within the sphincter are of the internal variety, while the hemorrhoidal tumors situated outside of the sphincter which cannot be forced inside are of the external variety. The intero-external variety is a combination of the external and the internal. This variety occupies the verge of the anus, and is covered by both mucous membrane and skin.

The internal hemorrhoid is a varicose and dilated condition of the superior hemorrhoidal vein, therefore an affection of the portal system. The external hemorrhoid is a like condition of the middle and inferior hemorrhoidal veins, therefore an affection of the general venous system.

In the intero-external variety both sets of veins are involved.

External hemorrhoids are met with in any one of three different forms. The first is simply a venous tumor, the result of a phlebitis and consequent thrombosis of a varicose vein ; the second, a tumor composed of dilated and varicose veins

with a proliferation of the surrounding connective tissue; the third, a tumor made up almost entirely of proliferated connective tissue.

Internal hemorrhoids are met with as one of two forms: the capillary and the venous. The capillary hemorrhoid is composed of the terminal branches of the arteries and veins and intervening capiliaries. It is this form of hemorrhoid which bleeds upon the slightest irritation; its surface, too, is granular, and presents somewhat the appearance of a strawberry. The venous hemorrhoid is made up of anastomosing veins and connective tissue; this I regard as but an advanced stage of the capilliary hemorrhoid.

The treatment of hemorrhoids is palliative and radical. Concerning the palliative treatment I will have but little to say other than that I regard having the bowels move daily, and observing the strictest cleanliness, the two most important indications to be fulfilled. Doubtless, in some instances, one or other of the various astringent ointments, so commonly used, may be of some advantage, yet I have little faith of their accomplishing a cure.

Before recommending radical treatment, the case is first to be thoroughly examined to determine whether such a procedure is justifiable.

Hemorrhoids may be symptomatic of visceral disease, of structural changes in the wall of the rectum above the pile-bearing area, such as carcinoma, stricture, etc. Under these circumstances the proper treatment would be the correction, if possible, of the condition giving rise to the hemorrhoids. Again, they are often secondary to disease of the uterus, the bladder—as when a calculus is present—an enlarged prostate or a stricture of the urethra, etc.

In advising radical treatment a careful examination should be made first to determine whether any of the previously mentioned conditions are present or not. The urine is to be carefully examined, when, if albumen is present and dependent upon heart or kidney affection of a serious character, operation is to be strongly advised against

The Radical Treatment of External Hemorrhoids.—In the first form, that of the venous tumor, the result of a phlebitis, thrombosis, etc., it will suffice to incise the tumor freely, and turn out the clot, after which the wound is to be packed gently, and thus favor healing from the bottom. In the second variety, that of dilated and varicose veins with proliferation of the neighboring connective tissue, it will often suffice to stretch the sphincter muscles, when if this fails, I strongly recommend removal of the tumor with the clamp and cautery; in the third variety of external pile I also use the clamp and cautery. In either of the two latter varieties, when the tumor or tumors assume considerable size, it may not be possible to engage them individually in the clamp; under these circumstances they should be bisected, as it were, and each half clamped, the redundant portion cut away, and the pedicle cauterized. It is in this variety of pile, when involving the entire circumference of the anus, where the Whitehead operation is applicable, but so far as my observation goes it does not offer any advantages over the clamp and cautery. When the external pile presents itself in the shape of a tab of skin it will suffice to remove it with a pair of scissors; in the event of bleeding following, it can usually be checked by the application of a wad of styptic cotton, over which is placed a compress and bandage, or the bleeding-point may be touched with the point of the cautery. In the second and third forms of external pile, if inflamed, tense, and painful, I think it much more satisfactory to etherize the patient and remove them at once, and not attempt to reduce the inflammation by the application of lead-water, laudanum, poultices, etc. I have found this a much quicker way to dispose of them, and at the same time less painful to the patient.

Operations for Internal Hemorrhoids.—In few departments of surgery have there been more operations devised for the cure of any one condition than that of internal hemorrhoids.

The following is a list of the most important which have been advocated:

Excision; removal with wire ecraseur; injection with carbolic acid or an astringent; the application of acids; removal by the galvanic cautery wire; dilatation of the sphincter muscles; clamp and cau-

tery; crushing; ligature and Whitehead's operation.

Of these, I have had experience with the clamp and cautery, ligature, injection of carbolic acid, Whitehead's and dilatation of the sphincter muscles. I now, however, rarely do any other than the clamp and cautery.

The advantage which the clamp and cautery possesses over all other procedures is its universal application. The instruments required to perform this operation are a Smith's clamp and a pair of pile forceps, a pair of scissors, and a Paquelin's cautery. A tenaculum or vulsellum may be used in place of pile forceps.

The first step in the operation is dilatation of the sphincter, which is followed by protrusion of the piles. The piles are now grasped with the forceps and the clamp adjusted. With the scissors the pile is trimmed down, leaving a pedicle one-quarter of an inch in length above the clamp. With the cautery iron at a dull-red heat the pedicle is reduced one-half, presenting a charred and dry surface. The clamp is now removed and the edges of the stump allowed to fold in. By leaving a pedicle as described, bleeding cannot follow the removal of the clamp. In cases where the pile-surface is muco-cutaneous, before the clamp is adjusted the skin should be divided with a pair of scissors, thus eliminating pain and subsequent contraction. The operation is completed by the introduction of an opium suppository, dusting the surface with iodoform, and the application of an antiseptic dressing. The after-treatment consists of rest in bed, light diet, and of the administration of one-quarter of a grain opium pill night and morning for from three to four days, when the bowels are moved by a laxative and an enema given when the desire to defecate is felt. After this the patient is allowed the freedom of the room.

The advantages of this operation are freedom from hemorrhage, the rapidity with which it is performed, the absence of pain in the majority of cases, the absence of retention of urine, and the patient's being able to resume his or her occupation ordinarily in from one week to ten days. Pain, irritability of the bladder, and prolonged convalescence occur in neurotic subjects. Further, I believe tetanus is less likely to follow this than any of the other operative procedures.

The objections to the ligature are the pain which follows the tying of the pile, retention of urine, the amount of blood lost in debilitated subjects, and the prolonged convalescence consequent upon the process of separation of the ligatures.

The objections urged against the injection of hemorrhoids are the liability of sloughing and fistula, the formation of abscess, the possibility of a diffused inflammation with pyæmia, an extension of the inflammation to the peritoneum, and embolism. While injecting a pile the base should be constricted until coagulation takes place, to prevent an embolus from being carried into the circulation.

The objections to the Whitehead's operation are the time required for its performance, the amount of blood lost, and the danger of the stitches cutting out, leaving a circular granulating surface which may result in atresia of the rectum. Again, it is only applicable in a comparatively small number of cases.

Dilatation of the sphincter muscles, like the Whitehead operation, is only applicable in a few cases, especially those of recent origin, and in the case of prolapsed hemorrhoids which are prevented from repositing themselves on account of being grasped by the sphincters. In the former instance it may suffice to bring about a cure if proliferation has not taken place to any extent, which is always questionable. In the latter case it can only offer a palliative means. When internal hemorrhoids become strangulated and gangrenous, they should at once be removed, preferably with the clamp and cautery.

THE TREATMENT OF ISCHIO-RECTAL ABSCESS AND FISTULA-IN-ANO.

By HENRY R. WHARTON, M. D.

[Read before the Philadelphia County Medical Society, November 23, 1892.]

I HAVE been requested to say a few words this evening on the treatment of ischio-rectal abscess and fistula-in-ano to open the discussion upon these subjects by the members of this Society.

TREATMENT OF ISCHIO-RECTAL ABSCESS.—In this form of abscess the puru-

lent matter occupies the loose cellular tissue of the ischio-rectal fossa in close relation to the rectum, and from the anatomical peculiarities of the tissue in which it is situated it is apt to burrow widely and, if left to itself, to open into the rectum or through the skin into the region of the anus, and result in the production of one or other forms of fistula-in-ano, either the complete form or the external or internal incomplete form of this affection.

To obviate this unfortunate result the prompt treatment of ischio-rectal abscess is urgently demanded, and I am decidedly of the opinion that attempts at abortive treatment of this form of abscess are worse than useless, that by such treatment valuable time is lost, and the surgeon has finally to resort to surgical treatment after extensive burrowing of pus has occurred with possibly perforation of the wall of the rectum.

It is, and has been for a long time, a surgical axiom that an ischio-rectal abscess should be opened promptly, and if so treated the probability of a fistula-in-ano resulting is much diminished. I formerly was satisfied to open these abscesses by a small incision, evacuate the pus, and in many cases a prompt recovery took place without the formation of a fistula, but in others a fistula resulted, whether the rectal communication was present at the time of opening or resulted from the imperfect drainage secured by a small incision I am unable to say, but I am sure that the results I have obtained in these cases during the last few years since I have adopted Mr. Allingham's method of dealing with these abscesses have been much more satisfactory. By this method of treatment, even in cases where I have been able to demonstrate a rectal communication at the time of the operation, I have secured healing without the formation of a permanent fistula. Therefore, in any case of inflammation of the tissues of the ischio-rectal fossa, whether the evidence of abscess be clearly demonstrated or not, I follow the method which is recommended by Mr. Allingham, which consists in etherizing the patient and placing him in the lithotomy position, after having located the position of the indurated tissue or abscess; and a rectal examination by means of the finger will often assist in locating the position of the abscess. A free incision, several inches in length, is made through the tissue, outside of and parallel with the fibres of the external sphincter muscle, and the incision is gradually deepened until the pus cavity is reached. It is then slit up to the length of the skin incision and the cavity is explored with the finger, breaking down any loculi which tend to divide up the abscess cavity, and so make one cavity of the abscess. The cavity of the abscess is next washed out with a 1:2000 bichloride of mercury or 1:60 carbolic acid solution and is then packed with strips of iodoform gauze, and a pad of the same gauze is placed over the wound, and over this a pad of bichloride of mercury cotton is laid, and the dressing is secured in position by a T-bandage. An opium suppository is introduced into the rectum and the bowels are kept quiet for three or four days.

The dressing is not removed for two or three days, and at this time the packing is usually loose and can be removed without difficulty, and after its removal the cavity is injected with peroxide of hydrogen, and it is then irrigated with a 1:2000 bichloride of mercury solution, and next the cavity is lightly packed with strips of iodoform gauze and the wound is covered with a pad of iodoform gauze and bichloride cotton. The same steps are observed at subsequent dressings, which are made at intervals of two or three days, and the cavity usually heals rapidly by granulation and contraction, and in a few weeks it is usually completely healed.

Mr. Allingham recommends that the cavity be packed with lint saturated with carbolized oil, and I have employed this material, but now prefer to use the iodoform gauze, as I stated above.

I will report briefly a case in which this treatment was adopted. In January of this year I saw, with Dr. Musser, a lady, forty years of age, who had suffered for a few days with inflammation of the tissues of the ischio-rectal fossa. On examination of the case I found the left buttock for a distance of six or eight inches from the very verge of the anus, indurated, hot, and painful; no soft spot of pointing could be detected. An examination of the rectum showed bulging of the walls of the

rectum in the left side, and upon withdrawing the finger a small amount of pus escaped from the anus. The patient also stated that some matter had been discharged from the rectum during the day. The patient was etherized and a curved incision four inches in length was made just outside of the line of the sphincter muscle. This was gradually deepened until the cavity of the abscess was opened and a free discharge of pus, many ounces, escaped. On introducing my finger I found that the cavity extended laterally for some distance and passed upward between the wall of the rectum and the sacrum. In fact, with my two fingers introduced to their full length in the wound I could not reach the upper portion of the abscess cavity. A careful examination failed to reveal the position of the opening into the rectum. The abscess cavity was thoroughly irrigated with a 1:2000 bichloride of mercury solution and was then packed with strips of iodoform gauze, and a pad of gauze and bichloride cotton was placed over the external wound and held in place by a T-bandage. The patient did well after the operation and the cavity was dressed in the same manner every second or third day for the first two weeks, and at less frequent intervals after this time for six weeks, at which time healing was complete.

There is no question in my mind that there existed a communication between the abscess cavity and the rectum before the operation, as was shown by the discharge of pus, and by the discharge from the wound, about a week after the operation, of a piece of bone a little larger than a grain of corn. This bone, Dr. Harrison Allen examined for me and pronounced it to be a portion of a transverse process of a sheep's vertebra. It had been swallowed with the food and had ulcerated through the wall of the rectum, and had set up inflammatory action in the peri-rectal cellular tissue, terminating in this extensive abscess.

The points in the treatment of ischio-rectal abscess I would especially call attention to, are: Early and free incision; thorough breaking down of any secondary abscess cavities into one cavity; irrigation of the cavity with peroxide of hydrogen and a 1:2000 bichloride of mercury solution or 1:60 carbolic acid solution; packing with iodoform gauze and subsequent dressings made in the same manner, care being taken not to pack the cavity too firmly. Following this form of treatment the results of this variety of abscess in my hands have been most satisfactory.

Treatment of Fistula-in-ano.—Ball classifies fistula-in-ano as a complete rectal fistula in which there is a sinus leading from the rectum to some point in the skin in the region of the anus; and the incomplete fistula he describes as internal rectal sinus, a sinus passing from the rectum into the peri-rectal cellular tissue; external rectal sinus, one having an opening on the skin, passing into the cellular tissue around the rectum, but not perforating the wall of the gut.

As regards the treatment of fistula-in-ano, the fact should not be lost sight of that it is possible to have a fistula-in-ano heal under simple treatment without operative interference. This is more apt to occur in recently formed fistula, but as the result of palliative treatment is always uncertain in these cases and a long course of local applications is required, this method of treatment is not generally adopted. Allingham says that he has had twenty-one successful cases under this method of treatment, and a number of cases in which he was unable to effect a cure after prolonged treatment. When this form of treatment is adopted it consists in trying to obliterate the fistulous track by rest, free drainage and the local use of stimulating applications such as carbolic acid, nitrate of silver, and sulphate of copper. Rest to the part is best secured by the wearing of a firm anal pad secured by a T-bandage.

At the present time the most widely adopted and successful treatment of complete fistula-in-ano is by incision. The patient is etherized and placed on his side or in the lithotomy position, a probe-pointed flexible director is then passed through the external opening of the fistula and conducted into the rectum; the finger is then passed through the anus until it comes in contact with the end of the director, which is bent and brought out of the anus; the tissues on the director are then divided with a scalpel or by means of scissors, care being taken to see that the division of the fibers of the sphincter

muscles is made at a right angle to the course of the muscular fibers; oblique divisions of the muscle do not heal well and are apt to be followed by a loss of power in the muscle. The main track of the fistula being slit up, it is next explored for the presence of branching sinuses, and if these are found they are slit on a director. In indurated sinuses it is often well to make an incision through the base of the sinus, which seems in many cases to facilitate the healing. If the cutaneous edge of the fistula or sinuses tend to overlay each other near the anus they should be trimmed off with the scissors. The surface of the exposed fistula or sinuses is next freshened with a curette, and after being washed out with a 1:2000 bichloride of mercury solution the cavities are packed with strips of idoform gauze or lint saturated with carbolized oil. A compress of gauze is next applied over the wound, and over this is placed a pad of bichloride cotton, and the dressing is held in place by means of a T-bandage. The patient is given an opium suppository, and the bowels are kept quiet for three or four days.

The after-treatment of fistula-in-ano is most important, and many unfavorable results are due to carelessness in this particular. On removal of the primary dressing, at the end of two or three days, the sinus should be washed out with peroxide of hydrogen and a 1:2000 bichloride of mercury solution, and a strip of iodoform gauze should be lightly passed to the bottom of the wound and allowed to rest between its edges. The mistake is often made in packing these wounds forcibly, which interferes with healing. A piece of gauze and a pad of cotton is next applied over the wound and is held in place by a T-bandage. The patient should be kept on his back two or three weeks, and the wound should be dressed in the manner described daily or on alternate days, and at the end of three or four weeks healing is usually completed.

In cases of fistula-in-ano of the horseshoe variety, one division only of the external sphincter muscle should be made, and the branching sinuses should be laid open by curved incisions passing parallel with and outside of the line of the muscle. Sinuses extending to the perineum or buttock should be freely laid open.

The treatment of incomplete fistula of the external variety, or of external rectal sinus consists in passing a director into the sinus down to the rectum, and if on passing the finger into the rectum, it is found that the director is separated only from the finger by the mucous membrane, and its position is low down in the rectum, it is better to push the director into the bowel and bring it out at the anus and divide the tissues as in complete fistula, and treat the resulting wound as described after the operation for complete fistula. If, on the other hand, the rectum is merely exposed at the bottom of the sinus, it is well to lay the sinus freely open to this point, curette its surface and pack it lightly with iodoform gauze. Subsequent dressings should be carefully made and the sinus will usually heal, though the course of treatment usually extends over a longer period of time than in cases where the sphincter muscle has been divided.

In internal incomplete fistula or internal rectal sinus, when the rectal perforation is low down, a bent director should be passed into the anus, and its point should be passed through the rectal opening and made to project on the skin near the anus. This is cut down upon and exposed and the director is pressed through it, making the fistula a complete one, and the tissues on the director are divided. The subsequent steps of the operation and dressing are similar to those mentioned in the cases previously described.

When the rectal opening is high up and it is considered inadvisable to divide the sphincter muscle or the bowel to its full extent, a director should be passed through the internal opening and the surgeon should cut down on its point from an incision through the skin a little outside of the sphincter muscle. When it has been exposed the sinus or cavity should be curetted and irrigated and dressed with iodoform gauze, and by careful dressing the wound may be made to heal from the bottom, the rectal communication being shut off by granulation and subsequent contraction.

Among various methods of treating fistula-in-ano should be mentioned the elastic ligature and the treatment by excision.

The elastic ligature is principally used in those cases in which the fistula opens into the rectum at a high point, where division by the knife would be accompanied by free hemorrhage. When employed, a cord of india-rubber one-sixteenth of an inch in diameter is threaded to an eye-probe which is passed through the cutaneous opening into the rectum and brought out at the anus; before tying the ligature, the skin and mucous membrane to the edge of the anus should be divided so that the ligation can bury itself when tied, thereby saving the patient pain and at the same time facilitating the more rapid division of the tissues by the ligature. After the ligature has cut its way through the tissues it is often found necessary to dress the wound in the same manner as in cases where incision has been practised, to secure satisfactory healing.

The treatment of fistula-in-ano by excision has been recommended by some surgeons. The fistulous track being dissected out, the parts are brought together by deep sutures, and if primary union is obtained there is a great saving in the time of treatment. The form of fistula in which this method of treatment is best suited is the complete fistula which is not very deep and has a straight course; branching fistula, and those very deeply situated, I do not think are favorable cases for this procedure. If in using this method of treatment it is found that primary union has not occurred, as shown by the escape of a little pus from the line of the incision, the sutures should be removed and the edges of the wound should be separated, and it should be lightly packed and treated—in fact, as a case in which primary incision had been practiced.

As fistula-in-ano often occurs in patients suffering from phthisis, the question of the advisability of operating upon these cases often must be considered. The rule in these cases is to operate unless the patient's disease is in a very advanced state when no repair could be likely to take place. In the majority of phthisical cases the result of the operation is satisfactory.

The only serious complication following the operation for fistula-in-ano is incontinence of feces, and this is fortunately a rare complication. It may be guarded against by care in dividing the sphincter muscle only at one point, and by seeing that the division of the muscle is not an oblique one. When incontinence exists, it may be relieved in many cases by excision of the cicatrix in the sphincter muscle and by suturing the freshened ends of the muscle together by catgut sutures, or by applying a point of Paquelin's cautery to the cicatrix or to several points of the mucous membrane and skin of the anal margin.

Discussion.

Dr. Thomas S. K. Morton: I am glad that Dr. Wharton has insisted upon early operation in ischio-rectal abscess. This affection involves loose cellular tissue richly supplied with lymphatics; and may give rise to profound septicæmia, if not pyæmia, if not relieved early. I have recently heard of a case of small ischio-rectal abscess which gave rise to pyæmia and death. The incision should be made as soon as the brawny induration is evident, feeling certain that if there is any inflammation in this region, where the tissues are so poorly supplied with bloodvessels and other means of destroying septic material, suppuration will follow.

In washing out these abscesses with a strong antiseptic solution it is important to see that all that goes in, comes out, and that none enters the bowel, for a few drachms of a strong mercurial solution entering the bowel would give rise to poisoning.

The packing should be applied loosely. Here, as well as elsewhere, much damage can be done by too tight packing. There is something about iodoform gauze that makes it superior to every other material for packing. What this is I do not know, but under its use the dressing is drier, there is less pus, and the whole case goes on in a more orderly and rapid manner. I like also to rub iodoform into the walls of these abscesses and into the sides of a fistula. Peroxide of hydrogen is one of the best antiseptics in these cases.

In regard to the bowels, I have a predilection for keeping them loose in all operations about the rectum, and very early give such drugs as will produce

partially liquid stools. This gets rid of the great pain and the terrible anxiety of the patient looking forward to the movement of bowels that have been constipated for several days after an operation.

Repacking is important, but in many cases simple inspection, particularly in fistula, is all that is necessary to see that healing is progressing properly in fistula, is all that is necessary to see that healing is progressing properly, and, if necessary, the wound can be painted with some stimulating solution, as a fifteen-grain solution of silver nitrate, balsam of Peru, etc. By careful watching, the painful process of repacking can often be avoided, although in some cases it will be required to secure uniform healing from the bottom.

Coming to fistula-in-ano, we should bear in mind that there are two great varieties: one is the tubercular, and the other the simple or traumatic, where a small foreign body perforates the wall of the rectum and sets up inflammation in the cellular tissue. Probably the ones that form slowly are simple, but may become infected with the tubercle bacillus. Granting that the large majority are tubercular, the treatment must be thorough and radical in order to get rid of the tubercle bacillus.

I agree with Dr. Wharton in regard to the use of the ligature, that only cases involving high section of the bowel justify that method. By this method we are apt to overlook the branches which are so common.

It is not always best to carry the director through the fistula and lay it open at once. It is sometimes better to dissect from the outer opening, treating the branches as they are met with, rather than to make the incision and have the the field of operation obscured by blood.

The excision of the fistula has not proven a success. I have conversed with one or two men who had much to do with the introduction of this method, and they acknowledge that after using it for several years it has proved far less useful than had been hoped. There were but few cases in which excision could be done, and of these few the majority suppurated, and the edges of the wound had to be separated.

In fistulas that are tubercular, and perhaps in all, after thorough dissection and opening up all branches, I have wiped the wound out with pure caustic potash. That stops the hemorrhage, it kills the lining membrane throughout, and perhaps some healthy tissue, but I think that we get a more radical operation, particularly in tubercular cases. We must, however, be careful not to go too deep After using the caustic potash it is well to carry over the wound a sponge saturated with vinegar, in order to stop the action of the alkali. The indurated tissue can also be destroyed with the Paquelin cautery, but when this is used the surrounding tissues must be very carefully protected from the radiating heat.

There are scarcely any fistulas that cannot be benefitted by operation. There are many that cannot be cured, but all that I have seen have been benefitted. I can recall several cases that are going about with a small sinus running high up, but yet are remarkably comfortable contrasted with their former deplorable condition.

DR. A. J. DOWNES: Neither of the gentlemen has referred to multiple fistulas. I have recently had such a case in a tubercular woman forty-two years old. During the past ten years she had had four ischio-rectal abscesses that had opened, and numerous other plegmons that had not opened. I operated on her four weeks ago at St. Joseph's Hospital. I found four fistulas. On the left, two, one close to the external sphincter and entering the bowel behind the internal sphincter; the second an inch and a quarter from the margin of the bowel and entering the bowel an inch and a half from the anal margin. On the right side there were two, whose external orifices were two inches apart, and an inch and a half from the margin of the bowel. In operating I cut through the left side at right angles to the sphincter, and on the other side made a wedge-shaped incision, extending above the openings in bowel, including both fistulas. I expected to cut the sphincter on this side at a subsequent operation. Sixteen days later I etherized and found that I had succeeded in closing the internal openings on the right side. I had thus succeeded in one

operation in curing the four fistulas with but one incision through the sphincter, nor can I see why it should be necessary to even cut the sphincter twice in any case.

On two occasions in the office I have used the rubber ligature for fistula in otherwise healthy people, with excellent results.

DR. J. M. BALDY: I have been somewhat surprised at the small amount of space that Dr. Wharton has given to excision of fistulas and to the utter condemnation of that treatment by Dr. Morton. My experience has been so contrary to this that it may be of interest to mention it. In past times I have treated fistulas by cutting and packing, and I have seen a number of cases in which non-control of the sphincter continued for a long time. I then gave excision a trial, and I have never in a single instance regretted its use, nor have I had a single failure in the ten to fifteen cases in which I have employed it in the last two years. In simple fistulas I have slit open the fistula, and with curette, scissors, or thin-bladed knife removed the indurated tissue, and then have placed sutures buried completely around the fistula; and have finally closed the mucous membrane, from the bowel, with catgut sutures. Where there have been multiple sinuses I have cut out all partitions between the sinuses. In one case the opening was one-half to three-quarters of an inch in width. I rubbed in a strong antiseptic solution, obtained primary union, and a perfect result. I remember a case in Trenton on whom a perineal operation had been done by a friend. This was followed by an ischio-rectal abscess with an opening into the rectum. The lady was also suffering from hemorrhoids. I laid the fistula open, exposing a cavity that looked most formidable. The slit in the bowel was probably two inches long. I curetted the cavity, rubbed in a strong bichloride solution, taking one-half to three-quarters of an hour, closed the wound with sutures, which did not go within half an inch of the bottom, whipped the bowel together with catgut, and closed it without drainage, at the same time removing four hemorrhoids. Ten days later I removed the sutures, and in another ten days the patient was up and about, and the opening closed.

As I have said, in none of the cases operated on have I had cause to regret excision, and I should prefer it to all other methods where it was possible to introduce sutures, and nearly, if not fully, bury them all the way round.

In all my bowel operations I keep the bowels open from the first, and after the first passage the patients do not have much trouble. They are more comfortable than if they are permitted to have semi-hard discharges passing over tender surfaces.

DR. WHARTON: I am glad that Dr. Morton has called attention to the importance of using the bichloride solution so that none of it is retained in the rectum. I cannot say why it is that iodoform gauze is so exceptionally good a dressing in these cases, but it is certain that it does better than any other material. I also use the powdered iodoform.

Practically the second dressing is not a repacking. I simply pass a piece of gauze to the bottom of the wound and allow it to project between the edges. I have also used the method referred to by Dr. Morton without repacking.

I use the caustic potash in many cases, particularly where the walls of the sinus are very dense, but neglected to mention it in the paper.

In the chronic cases that have been operated on many times, I think that the great secret of treatment is thorough curetting and free drainage. If the sinus can close so that pus can accumulate, the patient suffers. If the drainage is free the patient is more comfortable.

In regard to double fistula, I spoke of this under the head of horseshoe fistula, and recommended one division of the sphincter at a time.

Dr. Baldy's results have been very satisfactory. I have myself not had a very extensive experience with excision. I meet with many cases in which the operation could not be satisfactorily accomplished, and in these I prefer incision.

If the bowels are moved promptly after the operation it is apt to disarrange the packing, and sometimes the first packing is important in controlling hemorrhage from the wound.

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DIPHTHERIA AND PSEUDO-DIPHTHERIA.

IN the Bulletin of the Johns Hopkins Hospital, W. D. Booker discusses the relation of pseudo-diphtheric angina to diphtheria. The difficulty of diagnosing the scarlatinal pseudo-membranous angina from diphtheria is very great. Indeed, many physicians look upon this as a true diphtheria engrafted upon the scarlatinal angina. The discovery of the specific cause of diphtheria has, however, afforded a certain means of differentiating the two maladies.

Clinically, the cases are sometimes indistinguishable. In scarlatinal angina the exudate is yellow, non-cohesive, tends to ulceration, and is accompanied by marked adenitis, and dysphagia. The tissues are penetrated deeply, and the ear is often affected; the larynx less frequently, the trachea and large bronchi still less, but capillary bronchitis and pneumonia are not so rare. The inflammation is of an active type.

In diphtheria the membrane is white and tough, there is rarely suppuration, little pain or swelling, no ulceration. The affection extends by the surface; often to the air-passages. There is less active fever, that soon subsides.

The anatomical diversity is more distinct. The scarlatinal deposit penetrates deeply, the tonsil is purulent, and micrococci are found. Later, ulceration is prominent, and much tissue is lost. The destruction is not limited to the throat, but may affect the lymphatic glands, or the deeper cervical tissues even as far as the clavicle. The spleen, peritoneum, mesenteric glands, kidneys, and pulmonary apparatus may be affected with necrosis, suppuration or infarction; while remote organs are invaded by micrococci.

Diphtheria seldom has gangrene or deep ulcers. The glands are firmer, with hemorrhagic color and whitish foci. The air-passages are as a rule involved, in fatal cases. The membrane extends farther, and is more consistent and adherent on the fauces than in the larynx. The death of the epithelium causes coagulation necrosis. The necrotic epithelium becomes hyaline, and assumes the form of a fibrinous network. Inflammatory products, leucocytes, red cells, serum and fibrin are constituents of the false membrane. The subjacent basement membrane undergoes similar changes, becoming a hyaline network. The vessel walls participate in this change, but still convey blood. Hence, hemorrhage follows the separation of the membrane, or, if necrosis accompanies it, ulceration may follow. The bacilli are in and under the superficial layer of false membrane. The outer layer contains a variety of organisms, mostly saprophytes. Under this is the bacillus-tenanted locality, rich in cells. As the pseudo-membrane passes in towards the basement, fewer cells and

bacilli are found. The wide fibrinous layer next, lying on the basement membrane, has few or no bacilli.

The bacilli do not invade the body, but their toxic products are absorbed, and various lesions result. Oertel describes the cellular changes in the neighboring glands, and in remoter tissues, that contain no bacilli and do not suppurate. These lesions have been produced experimentally. The diphtheric toxine causes them when injected, but does not produce false membrane.

The decisive diagnostic test is the presence or absence of the Klebs-Loeffler bacillus ; the specific cause of diphtheria. But as a non-pathogenic bacillus exists, that cannot be distinguished morphologically from the diphtheric bacillus, the latter must be identified by inoculation tests. The absence of both is positive proof that the affection is not diphtheria. But cases occur in which the picture of true diphtheria is presented, but the bacilli are absent. Wurtz and Burges found this the case in nine cases of early scarlatinal angina ; while in two cases of late angina, occurring on the seventh and sixteenth day, the Klebs-Loeffler bacillus was detected. Others have made similar observations. Baginsky found that children brought into the hospital with diphtheria contracted scarlatina ; when the appearance of the throat affection changed, and the Loeffler bacillus disappeared, being replaced by the cocci. To these Booker adds sixteen cases of scarlatina, in eleven of which there was pseudo-membranous angina ; three of measles, and three of follicular tonsilitis. The Loeffler bacillus was not found in any of the cases, even when the angina appeared later than the exanthem and continued a long time, (The city was then comparatively free from diphtheria). Streptococci were found in all the cases ; forming two groups. One type was larger, and the cocci varied in size. This reddened litmus and coagulated milk, then restored the litmus to a pink, instead of blue. The second was smaller and more uniform, faded blue litmus, but did not completely reduce it, and then changed it to a slight pink tint. Milk was not affected.

This leaves the question in this form : that the angina of scarlatina is less likely to be diphtheric as it occurs earlier ; and that as the graver forms occur on or after the seventh day of the disease, they may or may not be due to an access of true diphtheria ; to which both scarlatina and measles predispose the patient. The value of the clinical characteristics would, therefore, be great, were there any such uniformity in them as Dr. Booker implies. But in truth, so great is the liability to diphtheritic infection of such "pseudo-diphtheric" cases, that no patient with the latter can be considered secure from diphtheria for twenty-four hours after the most thorough examination, if diphtheria prevail in the vicinity.

Annotations.

THE *Bulletin Generale de Therapeutique*, November, in a report by Sgasse on organic liquid injections (enphemism for testicle extract), claims remarkable results from their use in cachexia, cancer, cholera, incontinence of urine, leprosy, pulmonary tuberculosis, muscular rheumatism, etc. Brown-Seqnard calls attention to dangers, mainly septic, arising in the course of such treatment and states that even death may result from too great or careless usage. He does not allude to the danger of the old fashioned method of administration causing life, at times, which was unexpected and undesired.

There is a germ of truth in many of the senile enthusiast's findings, and the explanation of some of his genuine successes may lie in there being am assimilable protagonous compound in animal tissues available where the nervous system is at fault. It may be found in larger quantities in parts of the body other than

those used by Seqnard, as well as in certain plants.

The sixth annual meeting of the National Association of Railway Surgeons will be held at Omaha in May, 1893. The general subject to be discussed is "Injuries of the Cord and its Envelopes without Fracture of the Spine." This is divided into thirteen sub-headings; and as among those set down as participating in the discussion are such men as Senn, Hughes, Outten, Watson, etc., the meeting will be of unusual interest.

But it is a pity that this very important subject is to be considered *only* by one side; by those whose sympathies must necessarily be on the side of the railways, as their services as experts are due to that side. Allowing them the utmost degree of impartiality obtainable by man, it would still be better to have the other side represented.

The mind of man is so constituted that facts are viewed by it through a medium favorable to the side with which one is interested. Witness the great eight-to-seven Electoral Commission, composed of judges whose integrity was unquestionable. Witness also the treatment Frank Billings received from the commission appointed by the government. All the members of this Association are serving the railroads; these gentlemen are paid employees of the defendant in the suit. How can they be impartial? If a really unbiased verdict is to be delivered, let the discussion be equally participated in by Clevenger and Moyer, Mills and Spitzka, by men who have no railway connections, and whose sympathies are against the railroads. Otherwise, we will have an *ex parte* statement of the case, all the more dangerous from the high character of the witnesses.

The *Revue Scientifique* states that the Australians, who formerly rejected the proposition of Pasteur to rid them of the rabbit plague by inoculating the animals with chicken cholera, are now driven to such necessity by the increase in the numbers of these animals that they have petitioned the Government to have the efficacy of Pasteur's suggestion tried on a large scale.

Letters to the Editor.

CONVENIENT REMEDIES FROM FIELD, GARDEN AND KITCHEN.

"OH thou sculptor, *doctor*, poet!
Take this lesson to thy heart;
That is best which lieth nearest,
Shape from that thy work of art."

The practical physician need seldom go far from his own or his patient's door to secure the aid of effective allies. In the neighboring fields, meadows and woods useful agents can always be gathered, and may be handily prepared, as infusions and decoctions. Others are easily obtainable from the adjacent garden. And a host of articles that come from the kitchen, may fill a gap and perhaps save a life.

Within more or less easy reach, grow many plants possessing tonic, astringent, purgative, sudorific, diuretic and other properties. Blood root, black root, burdock, butternut, boneset, blue flag, buckbean, blackberry, bearberry, celandine, couch grass, chestnut, cranesbill, Indian turnip, Indian cucumber, Indian tobacco, prickly ash, poison oak, poke root, pleurisy root, snake root, stone root, sumach, sassafras, smartweed, senna, shepherd's purse, slippery elm, sweet flag, shield fern, witch hazel, wild indigo, white oak, wormseed, willow and dogwood, dandelion, flea bane, goose grass, golden rod, golden seal, hemp, hellebore, Jamestown weed, larkspur, May flower, umbrella tree, yellow jessamine and yellow dock. Some of these are hard to find, except in certain localities, but many are almost ubiquitous and may be had for the seeking.

Blood Root (Sanguinaria Canadensis) inhabits fertile woods, and flowers in early spring. The root is employed in chronic bronchitis, atonic dyspepsia and duodenal catarrh. Large doses are unsafe.

Black Root (Leptandra Virginica) or Culver's root, grows wild in the woods, and is also cultivated. It blooms in July. The rhizome and rootlets are tonic, purgative, and cholagogue, and are used in dyspepsia and stomach affections.

Burdock (Arctium Lappa) flourishes in waste places near dwellings. The root and seeds are employed in dyspepsia and psoriasis, and also have diuretic and emmenagogue properties.

Butternut (Juglans Cineria) grows in the woods, and flowers from May to September. The nut is rough and deeply scored. The bark of the root is cathartic and cholagogue, and is serviceable in constipation and dysentery.

Boneset (Eupatorium Perfoliatum) or thoroughwort, is common in low grounds. The leaves and tops are tonic, diaphoretic and cholagogue; popularly used for sluggish liver, and often employed in remittent and typhoid fevers.

Blue Flag (Iris Versicolor) is a beautiful wild flower, blooming in boggy places in May. The rhizome and rootlets are cathartic, emetic, and cholagogue and aid in digestion.

Buckbean (Meneanthes Trifoliata) luxuriates in swampy places, flowering in May. The leaves act as a laxative tonic.

Blackberry (Rubus Villosus) abounds in thicket borders from May till September. The root is tonic and astringent and is a household remedy for diarrhœa.

Bearberry (Arctostaphylos Uva Ursi) is a shrub inhabiting sandy soils and bare hills, flowering in early spring. The leaves are tonic, astringent, and demulcent, and useful in cystitis, gleet, incontinence of urine and leucorrhœa.

Celandine (Chelidonium Majus) favors out-of-the-way places, flowering from May to August. The whole plant is employed in chronic rheumatism.

Couch Grass (Triticum Repens) flourishes in meadows, from June to August. The root is demulcent and diuretic, soothing inflamed mucous membranes, and relieves urethritis and cystitis.

Chestnut (Castanea Vesca) flowers in the woods, from June to July. The leaves are expectorant in catarrhal chest affections and whooping cough. They are a reputed specific for ivy poisoning.

Cranesbill (Geranium Maculatum) is found in fields and woods, flowering from April to July. It is hæmostatic, and a general astringent and is highly endorsed.

Indian Turnip (Arum Tryphillum), or dragon root, is common in thick woods, blooming in May. The dried root is used in asthma, whooping cough, and rheumatism.

Indian Cucumber (Medeola Virginica) is a common herb used in general dropsies.

Indian Tobacco (Lobelia Inflata) flourishes in dry places, flowering from July to September. The root and other parts are employed in asthma, bronchitis, and whooping cough. It is incompatible with alcohol, ammonia, belladonna, digitalis, ergot and strychnine.

Prickly Ash (Zanthoxylum Carolinianum) is a small tree, found on the coast, and blooming in June. The bark is used in chronic rheumatism, and as a sialagogue and emmenagogue. It is insoluble in water, but dissolves easily in alcohol.

Poison Oak (Rhus Toxicodendron) or poison ivy, climbs over rocks, and ascends thicket trees. The leaves are used internally in rheumatism, and locally in erysipelas and eczema.

Poke Root (Phytolacca Decandra), or pigeon berry, is found in moist places, woods, flowering in the fall. It has an unpleasant odor, and an uncommonly large root. The stalks are sometimes eaten for asparagus. The root is emetic, purgative, and narcotic. It is employed in chronic rheumatism and diphtheria. It is not compatible with alcohol, ether, digitalis, opium and strychnine.

Pleurisy Root (Asclepias Tuberosa) is common on dry hills, and elsewhere, flowering in June and July. The root is expectorant and diaphoretic, and is useful in many chest affections.

Snake Root occurs in several species. *Senega* is found in rocky places, flowering from May to June. The root is employed in bronchitis, asthma, and whooping cough. *Cohosh*, or black snake root (Cimicifuga Racemosa), occupies rich woodlands, blooming in July. The rhizome and rootlets are valuable as tonics and nerve stimulants, in chorea, rheumatism, cramps, menorrhagia, amenorrhœa, and ovarian irritation. It is incompatible with stimulants. *Serpentary*, or Virginia snake root, is an aromatic, fibrous root, having tonic, stimulant, and diaphoretic properties. It is used in rheumatism and typhoid fever, and as a gargle in malignant sore throat.

Stone Root (Collinsonia Canadensis) is

found in damp places blooming from July to September. The herb smells like lemons. It is diuretic and mildly stimulant, and is popularly used as a solvent in vesical calculus.

Sumach (Rhus Aromatica) is a low straggling bush, found in rocky, dry places, and blooming in April. This is a good astringent, used in diabetes, diarrhœa, cystitis, polyuria, and hemorrhages generally.

Sassafras has gummy twigs and a scented bark, and is at home in dense woods, flowering in April. The bark and pith are employed in rheumatism, and as a diuretic.

Smartweed (Polygonum) is a crimson herb, in wet places. It is rich in tannin and gallic acid, and is astringent, diaphoretic, and emmenagogue.

Senna (Cassia Marilandria) grows commonly in alluvial soil near ponds and rivers, flowering in July and August. It is a well known cathartic.

Shepherd's Purse (Bursa Pastorius) is a common weed in waste places, flourishing from April to September. It is much used in hemorrhages from the kidneys, bladder, and uterus.

Slippery Elm (Ulmus Fulva) grows everywhere, on high grounds, flowering in April. The inside bark is demulcent and emollient, and is prized in diarrhœa and dysentery. It is also used to mechanically dilate the os uteri, and strictures generally.

Sweet Flag (Calamus Acorus) flourishes in most swampy places, from May to June. The root is an aromatic tonic, useful in flatulence and indigestion.

Shield Fern (Aspidium Marginale) grows on rocky hills and is used as a good substitute for male fern.

Witch Hazel (Hamamelis Virginica) is found in damp woods, and blossoms in the fall. The bark is employed in uterine, gastric, rectal, nasal, pulmonary and renal hemorrhages, hay fever, etc., and is widely used as a healing lotion to bruises, wounds, and ulcers. It is antagonistic to alcohol, ammonia, belladonna, digitalis, and chloroform.

Wild Indigo (Baptisia Tinctoria) occurs in sandy woods and uplands, flowering from June to August. The bark of the root is used in fever, externally to old ulcers, and as a gargle for sore throat.

White Oak (Quercus Alba) provides an astringent decoction, useful in spongy gums, leucorrhœa, prolapsus, etc.

Wormseed (Chenopodium Anthelminticum) is found on fences and in waste places, in the fall. The fruit is effectual against round worms.

Willow (Salix Nigra) flourishes in summer. The bark contains salicin, and is famous in neuralgias, malarial fevers, and rheumatism.

Dogwood (Cornus Florida) grows commonly, flowering in May and June. The bark is tonic, digestive and astringent, and is valuable in convalescence from exhaustive diseases.

Dandelion (Taraxacum) is found everywhere, flowering from May to September. The root is a well-known diuretic, and is a good cholagogue in engorgement and congestion of the liver.

Fleabane (Erigeron Philadelphicum) flowers in summer in fields and woodlands. It is tonic, astringent, and diuretic, and is useful in hemorrhages and dropsies.

Goose Grass (Galium Aparine) is an annual herb, flowering in woods and covers after May. It is diuretic and refrigerant, and employed sometimes in cutaneous and urinary diseases.

Golden Rod (Solidago Odora) grows in old fields and pastures, flowering in September. The leaves and tops are stimulant and diaphoretic, and much used in colic and amenorrhœa.

Golden Seal (Hydrastis Canadensis) is found in the woods. The root is commonly used in inflammation of mucous membranes, in chronic ulcers, internally and externally; also as a cholagogue in sluggish liver and atonic dyspepsia and in duodenal catarrh. It is recommended also in uterine fibroids and gleet, etc. It lowers the blood pressure.

Hemp (Cannabis Americana) is found in waste grounds. The flowering tops have a narcotic odor, and taken internally, they cause a sort of intoxication (like Indian Hemp), and tend to relieve pain.

Hellebore (Veratrum Viride) occupies swampy places, flowering in June and July, but grows all through the winter. The rootlets and rhizome are used in rheumatism, neuralgias, palpitation, etc., and to reduce temperature in asthenic pneumonia, typhoid intermittent fever,

and many inflammatory affections. It should be avoided when the heart is weak or diseased.

Jamestown Weed (Stramonium Daturæ) blooms in waste places, from July to September. The leaves are smoked for asthma; and the seeds are said to be antidotal to mushroom poisoning. It is sometimes made into an ointment for the relief of pain.

Larkspur (Delphinium Consolidæ) occurs in fields and on roadsides, flowering from April to June. The root is used in scrofulous diseases, and externally for strumous ulcers.

Mayflower (Epigœa Repens) is found on pine hills and in sandy woods, flowering early in spring. The leaves are an excellent substitute for *uva ursi*, producing similar effects.

Tansy (Tanacetum Vulgare) is abundant everywhere, from July to September. The leaves are anthelmintic and tonic.

Umbrella Tree (Magnolia Umbrella) affects shady soils, and flowers in May and June. The bark is used as a tonic and antiperiodic, in rheumatism, dyspepsia, and fevers.

Yellow Jessamine (Gelsemium Sempervirens) grows in moist places near the coast, and presents a scented yellow flower, about March. The root is valuable in face-ache, odontalized neuralgia, Menière's disease, dysmenorrhœa, passage of gall stones, and, sometimes, in tetanus. Taken internally, it contracts the pupil; externally applied, it dilates it.

Yellow Dock (Rumex Crispus) grows in both waste and cultivated grounds. The root is mildly tonic and astringent, and is sometimes used in scrofula and skin diseases.

In the garden, we get cayenne pepper, parsley, sage, and wormwood.

Cayenne (Capsicum Annuum) is useful internally as a stimulant, and of much benefit in delirium tremens, given in beef-tea. Externally, it is a good counter-irritant, one part to four of flour. It is said to be antidotal to poisoning by shell-fish.

Parsley (Apium Petroselinum). The root is diuretic and purgative, internally; and a sprig will provoke an evacuation, if inserted within the sphincter.

Sage (Salvia Officinalis) is astringent and tonic. It grows all the year round. The leaves make an excellent gargle for ordinary sore-throat.

Wormwood (Artemisia Absinthium) grows on the roadsides and in gardens all the year round, and flowers in July and August. The leaves and flowers are anthelmintic, internally; and used externally, with vinegar, as a popular application to wounds and bruises.

The kitchen supplies us with borax, eggs, flour, flaxseed, lemons, mustard, salt, soda, turpentine, vinegar, and—very likely—cobwebs. *Borax*, in warm water, relieves stomatitis, pruritus, and itching in general; a small piece, allowed to dissolve in the mouth, removes hoarseness; and it is occasionally used in amenorrhœa and epilepsy. *Coffee* is useful in opium and belladonna poisoning, either by the mouth, or as an enema. Strong coffee sometimes blunts the faculty of hearing. *Eggs* are of value in poisoning by oxalic and other mineral acids, sulphate of copper, corrosive sublimate, white precipitate, chloride of zinc, tartar emetic, nitrate of silver, and in mechanical choking. The white part only should be used. *Flour* is an effectual application to burns, scalds, and erysipelas; and — mixed with water—is antidotal to poisoning by iodine. *Flaxseed* has unlimited uses as a poultice, a demulcent tea, etc.; a pound of seed in a warm bath, relieves the irritation of eczema. *Lemons* are refrigerant and anti-scorbutic, and useful in rheumatism, ague, and malaria. The juice of a lemon in a small glassful of hot water helps a "bilious" attack. *Mustard* is a stomachic stimulant, and all-round emetic, and is valuable in persistent hiccough. As a counter-irritant, plaster or poultice, it is a household word, and, moreover, is an ever-ready and energetic *diuretic*, when applied over the loins. *Salt* makes a quick emetic, in water; and, as an enema, is rapidly purgative, and destroys ascarides. Mixed with ground ice, it is a local anæsthetic, and useful in ordinary rupture. A spoonful, taken dry, may arrest pulmonary and gastric hemorrhage. Moistened with vinegar, it evolves chlorine, and provides a good household antiseptic and disinfectant. Hot salt baths are useful in rickets. *Soda*, in solution, alleviates itching, scalds and burns. Sometimes a half-teaspoonful,

taken every hour or two, in water, counteracts suppression of urine. *Turpentine* is of value in diphtheria, and in many skin diseases. It is also anthelmintic and hæmostatic, and has numerous uses. Topically, it is an active and reliable counter-irritant. *Vinegar* is useful in diarrhœa and dysentery, and in the stomach-aches and griping of children; also in bleeding from the lungs and stomach, and locally in uterine hemorrhage. It relieves obstinate hiccough, drunkenness, and sick headache; and is indicated in poisoning by caustic potash, soda, or lime. A cup of hot vinegar, into which a cent (red-hot) has been immersed, makes a capital paint for the cure of ringworm. *Cobwebs* arrest bleeding from slight wounds and leech-bites. Rolled up into pills, and taken internally, they are asserted to be antiperiodic in intermittent fevers. *Whitewash* or *plaster* from the wall may be hurriedly utilized in poisoning by mineral acids. Stray articles in or about the dwelling may serve the physician in an emergency. In the absence of a catheter, a *piece of wire*, doubled up, and suitably curved, may relieve retention of urine, by expanding the canal. A *piece of a clay pipe* serves for a female catheter, and has been substituted for a tracheotomy tube. A piece of string, tied firmly around the limb, above, will arrest cramp. A strip of band-box makes a temporary splint. A piece of a *mustard leaf*, folded into a cone, and inserted in the nostril, provokes bleeding, and relieves cerebral congestion. An inverted wine-glass provides a good-sounding stethoscope.

LOUIS LEWIS, M. D.

IMPOTENCE FOLLOWING TYPHOID FEVER.

YOUR opinion as to the diagnosis and treatment of the following case would place me under many obligations, the patient being a young man of excellent family, and of great worth himself, mentally and morally. X. X., native American; age, 29 years; height, 6 feet; weight, 180 pounds; dark hair and eyes; apparently strong and healthy. Had measles in childhood, also malaria; no sickness since until in the spring of 1890, when he noticed a gradual loss of the power of erection, with a gradual loss of sexual desire, until by the 1st of September, 1890, a total loss of both desire and erection had taken place. He has a frequent desire to urinate, with sometimes difficulty in passing the urine, and sometimes an inability to retain it; before and during the micturition pain of a burning character at the neck of the bladder, and pain in right forefinger while passing urine. The amount of urine is in excess of normal. He has thirst, drinking large quantities of water; the bowels are regular, and sleep normal; appetite good. Under the eyelids he is œdematous in the morning. He is not losing weight. He uses tobacco and whiskey moderately, also coffee. In November, 1890, he had, so he states, a severe attack of typhoid fever, followed by phlebitis; both limbs were swollen badly, and are yet swollen somewhat, with enlarged superficial abdominal veins. In January, 1892, he had an attack of pneumonia on the right side. I have examined his urine repeatedly for sugar and albumen, always with a negative result. I have also sounded him for stone, with negative result. He denies any venereal history, or history of masturbation, or excess of venery. If these symptoms had followed the attack of typhoid with phlebitis, I should have believed that the blood supply had been shut off; failure to find sugar, albumen or stone, puts me in a quandary; the nerve supply is also in good condition, as is evidenced by the patient's statement, that, by masturbating the flaccid penis, the ejaculation of semen takes place with pleasurable sensations. The penis and testicles are of normal size and there is no diseased condition apparent, except an occasional eruption of herpes on the glans penis, which yields readily to a few sponges, with 1 to 2.000 bichloride solution. Being unable to find the cause, I have had him on a general tonic treatment, together with the aphrodisiacs, but without result. I might mention, as remedies that have failed, strychnine, iron, phosphorus, saw palmetto, salix nigra, faradic current, cold sounds, etc., etc. Although I have utterly failed to find a stone, that peculiar pain in the right forefinger is very suggestive.

R. H. G. RHEA, JR., M. D.

[There has been wide-spread phlebitis following the typhoid, and this has affected the blood

supply of the penis, and probably the portal system. Give the patient syrup of hydriodic acid, apply mercurial ointment locally, and if he has not improved in six weeks, send him to the city for a course of massage, electricity and hydropathy.—Ed. T. & R.]

HOW TO CURE GLEET.

I WRITE you, hoping I can get some assistance in treating a case of chronic urethritis. Having much of that practice, and finding such cases refractory to almost any treatment; it is growing very discouraging both to myself and to my patrons.

I find that seven-eighths of all the cases that present for treatment have excessive hyperesthesia, and in one half of such cases there are strictures.

I have tried the remedies you suggested some months since: Salol internally, with zinc and morphine as injection, but I find but little satisfaction from their use. I use on all cases the metal sound, of a size to suit the canal. This gives better results than any other remedy. I have blistered the canal externally with cantharidal collodion, from the anus to the scrotum, and from the scrotum to the meatus, and repeated them. They do some good, but few are willing to try this remedy, as it is very painful. I have used cocaine, morphine and atropine, in suitable quantities as an injection, and I find that the old Lafayette mixture does as well, with this injection, as any remedy I have tried, but it don't seem to produce a radical and lasting cure. When they seem well, one or two acts of coitus will bring back the discharge, and light up all the original conditions; and these conditions produce a multitude of abnormal symptoms and lead to hypochondria.

I have tried electricity, but with little benefit. Of course I do not expect to treat all such cases alike. We must be guided by present conditions and by the idiosyncrasies of constitution. Yet with a varied treatment I am not satisfied with results, and write you for an expression of what you would do, or what you consider best to do.

Such cases give rise to many nervous phenomena; such as a feeling of being lost, looking on the dark side of life, much confusion of ideas, pain or an indescribable feeling at the base of the brain, insomnia, etc. Many sleep and eat well, yet complain of head troubles, in a word, they embrace the catalogue of neurasthenia symptoms.

But this excessive tenderness of the canal is one of the worst features of such cases. If I can cure that, then such cases would not be unpleasant while being treated. I shall be pleased to hear from you on this subject.

R. L. Allen.

Peoria, Ill.

[This is one of many letters received on the same subject. No class of cases gives the physician more trouble than these uncured gonorrhœas. We are collecting material now for a special number exclusively devoted to gleet and invite contributions to it from all who are interested in Dr. Allen's questions.—Ed. T. & R.

A POSSIBLE ELECTRICAL TREATMENT FOR CHOLERA.

Some means of acidulating the ilium contents would undoubtedly stop the ravages of cholera; upon this point bacteriologists are agreed, but how to do it is the question. Laparotomy is a severe undertaking, and flushing the colon with acidulated fluids would not insure the entrance of the fluid beyond the ileocœcal valve, which would resist its passage. Probably elevating the hips and filling the colon with acid oil, (tannic, acetic), etc., might admit of the small intestines being reached in time.

An electrical expedient occurred to me as theoretically warranted: The serum of blisters caused by the application of the positive galvanic pole is acid in reaction, the negative electrode causing alkalinity. I would suggest, therefore, experiments with animals to determine if sufficient current strength cannot be passed abdominally from a positive electrode to acidulate the intestinal contents for the time being. Either a large diffused electrode similar to the one used by gynæcologists may suffice or the small testing electrode used in electro-diagnosis which concentrates the current.

Let the physiological laboratories investigate and report.

S. V. Clevenger.

70 State St., Chicago, Dec. 7, 1892.

Society Notes.

THE CLINICAL SOCIETY OF MARYLAND.

Dr. S. A. Keene read a paper on PERSONAL EXPERIENCE IN THE CHOLERA EPIDEMIC OF 1866.

Dr. Keene said in part: About the latter part of September, 1866, cholera broke out among some oyster men, while dredging in the lower waters of the Chesapeake Bay. The origin was assigned to a vessel hailing from Philadelphia, where the disease had been raging for two or three months. I saw my first patient one midnight. He had been vomiting and purging not more than an hour or two. I believed it to be an ordinary attack of cholera morbus; as there was not then the slightest suspicion of cholera nearer than Philadelphia. I prescribed opium and bismuth, to be followed by a purgative, and probably mustard poultices to the abdomen. Next morning, while on my way to see this patient, a messenger met me with a call in another direction. I followed the messenger, and I reached the patient, a messenger met me with a call in another direction. I followed the messenger, and, when I reached the patient, I found him affected similarly to the one I had seen the night before; and from him I learned, for the first time, that there was a disease prevailing among the oyster men dredging at James' Island, from which they were "dying like sheep;" and that he and Slocum, my first patient, becoming alarmed, had left their boats the evening before to come home, about thirty-five miles distance. On the way, Slocum had complained of feeling badly, but when they parted about ten o'clock he had not vomited. My second patient had slept well during the night and had only been aroused early that morning, by a desire to evacuate the bowels. I prescribed the same remedies as for my first patient. I hurried to my first patient and found him dying He died two hours later, within twelve hours from the time he and his companion separated the night before, and within nine hours from my first visit. I returned immediately to my second patient and found that vomiting had come on during my absence and the purging had also increased. He seemed quite prostrate and very anxious. Really I did not know what to do. With a very limited experience, for I had only graduated eighteen months before, all alone in a country place, having just left a corpse and now standing before a most probably prospective one, you may well imagine my feelings. If I had never before appreciated the responsibilities of my profession, it is needless to say that I now realized them all. Opening my little armentarium, and thinking all the while what I should give, I could conjure nothing nor select anything more than what I had already given him. During my perplexity, the patient's old mother suggested that injections of red oak bark tea might be of service. I eagerly accepted the suggestion. The old lady knew how to make and give the injection, so I left to consult my books, promising to return soon. When I reached home there was another call, which I found to be a similar case. Within four or five days I received seventeen calls to cholera patients, all of them oyster dredgers and coming from the affected boats. I gathered up my journals and read them as well as I could on my route, while my boy drove. The different authors did not agree any better then than now, and I found no encouragement in my dilemma. Opium seemed to be the only thing agreed upon, but I had tried it and seen it fail. I had already learned that time was valuable and action must be prompt. I was constrained to believe that the tendency to exhaustion could best be met by a stimulation, and for that purpose I combined chloroform, tincture of camphor, tincture of capscium, tincture of opium and brandy: of which I gave liberally and frequently. I was pleased with the effect. It not only stimulated the patient but it relieved the cramps, and, I believe had a controlling influence over the vomiting. At any rate sixteen of the seventeen cases recovered. To revert to my second patient; when I returned I found him much relieved of the purging and in every way better, and by the next morning he was well. I have no doubt but the red oak bark injections were of great benefit to this patient. I adopted it in all the other cases.

This little outbreak of cholera, a partial account of which is here given, did not last more than two or three weeks, and in accord with its peculiar characteristics, the greatest virulence and mortality were in the beginning. The cases I saw were not in the places infected, but had been removed to their homes many miles away. There was but one case in which I had any suspicion of contagion, and that was the wife of one of my patients, who had a very slight gastro-intestinal irritation.

Dr. A. C. Pole read a paper entitled,

A Contribution to the Literature of Foreign Bodies in Surgery.

On September 7, 1885, G. W., who had been assaulted by a crowd of roughs, presented himself to Dr. Pole with an incised wound between the anterior and upper part of the auricle and the temporal bone. The wound was examined and cleaned, and as a foreign body was neither seen nor suspected, the wound was stitched and dressed, and in a few days it was healed by primary union. Two years later the patient had a discharge from his ear, and behind a fungus like growth could be felt; what seemed to be a projection of uncovered bone. He was seen by an eminent specialist who attempted at several sittings to remove the "bone," but without avail. Examination from time to time showed that the projecting body was lowering in the auditory canal and becoming slightly movable. September 22, 1892, the patient was anæsthetized, and Dr. Pole removed through the external auditory meatus a piece of dagger blade, measuring $\frac{31}{32}$ of an inch in length; the point having entered the posterior wall of the canal and penetrated into the mastoid cells to the depth of about $\frac{5}{8}$ of an inch. The piece of blade had been in this position for seven years, the patient is now quite well. He has been relieved entirely of severe neuralgic pains from which he had suffered for several years past.

Dr. J. M. T. Finney related a case of

Severed Fingers Re-applied Seven Hours after Accident, With Perfect Union and Recovery of Motion and Sensation.

On Jan. 2, 1890, the patient came to the Johns Hopkins Hospital about half past twelve o'clock, giving the following history: He was a machinist by trade, and was running the engine in a tin shop, in the absence of the regular engineer. He went to work about five o'clock that morning; and, a little later, while going about a machine used for chopping blocks of tin, he dropped something, and while stooping down to pick it up, his hand slipped under the knife and the ends of the middle and ring fingers were cut off. The middle finger was cut off just beyond the last joint. The joint was opened. The ring finger was cut off just above the root of the nail. This occurred, the man said, about half past five o'clock. He wrapped up the stumps and went home, where his wife covered the wounds with beeswax. He arrived at the Hospital at the time previously stated. I asked him where the stumps of the fingers were, and he produced them wrapped up in a piece of newspaper. They were very cold, and almost frozen. I placed them in a basin of warm water, using no antiseptic, because bichloride or carbolic acid might cause a layer of coagulation-necrosis and prevent union. I scrubbed up the stumps of the fingers with a 1-2000 warm bichloride solution, then I carefully rinsed them off in warm water. This process consumed at least half an hour. Then I took a shaving off the ends of the fingers, so as to have a perfectly fresh surface. The stumps were treated in the same manner. The bone was scraped. I then sewed the ends on, using four stitches in each case. I then applied strips of *crepe lisse* with collodion the whole length of the fingers on each side. These held the severed portions in exact apposition. Then I used other strips around the fingers, binding them together and then applied a palmar splint and used a large absorbent dressing. He came back in a week; and when the dressing was removed the fingers looked very well. I re-applied the dressing and told him to report in another week. Dr. Brockway saw the case on his return, at the end of the second week. He took out the stitches and removed the dressing, and said that there was no doubt but that the fingers had united, and that the man seemed to have sensation at the ends of the fingers, although he thought that this sensation might have been transmitted. The man then disappeared

entirely from view. He returned about a month ago with an injury to his other hand. It is difficult to say, at first sight, which hand was injured. There is a slight motion in the joint which was opened, and the sensation in the fingers is perfect.

Dr. Randolph Winslow: "This case of Dr. Finney's calls to my mind a case which I had about fifteen years ago. I was called one day to see a woman who followed the occupation of an upholstress. She had chopped the end of her thumb off with a hatchet, perhaps half an hour before I saw her. Upon making inquiry about the missing piece, I was told that it was about the floor somewhere. I hunted it up, cleaned it, put it on with adhesive strips, and it is there to this day. It is rather an important matter that we should replace these lost parts, and in many cases we will have success. I have a number of times replaced parts which were essentially cut off, attached by a minute portion of skin, with successful union."

WM. T. WATSON,
951 N. BROADWAY, BALTIMORE. *Secretary.*

The Medical Digest.

HERNIA.

DR. MARCY, of Boston, who is well known as a surgical authority, and a special contributor upon the subject of hernia, read an interesting paper upon the cure of inguinal hernia in the male. He offered as the special reason for the introduction of this subject the fact, that this variety of hernia was still considered by the larger number of surgeons of such extreme difficulty in cure that surgical measures were to be advised only most exceptionally when the integrity of the intestine was not endangered.

Dr. Marcy dwelt at some length upon the anatomical construction of the parts involved, emphasizing the normal obliquity of the inguinal canal which, although always sufficiently patent to allow free mobility of the cord and its vessels, was so disposed that the intra-abdominal pressure in every position of the body was ever maintained at right angles to its long axis, keeping its walls in apposition, analogous to the entrance of the ureter into the bladder. This was demonstrated by a large number of photographic illustrations of carefully prepared anatomical dissections projected upon the screen, showing the normal relationship of the parts, and especially emphasizing the structures which make up the posterior wall of the inguinal canal. The author dwelt at considerable length upon the incipient changes incident to inguinal hernia and traced the pathological conditions which ensue as the disease becomes pronounced, showing that these were always in ratio with the departure from the normal line of the inguinal canal, which causes a deflection of the intra-abdominal pressure so at last it falls in the line of the opening instead of at right angles to it.

The problem presented to the surgeon for the cure of hernia is the reconstruction of the canal to its normal condition. Until a very recent period this had never been attempted or considered within a safe surgical limit, and it is easy to understand without special demonstration that the closure of the structures which make up the abdominal wall external to the canal must ever leave a wide funnel-shaped opening in the line of the intra-abdominal pressure, thereby inviting a return of the hernia and hence the failure to cure.

The reconstruction of the posterior wall of the canal is rendered possible by aseptic surgery and the use of buried animal sutures. The first permits a safe dissection of the parts, while by the proper use of buried tendon sutures, the posterior wall of the canal may be restored, strengthened, and re-enforced, and the lower border of the internal ring is narrowed and closed in quite upon the cord. Before doing this, however, when the peritoneal sac is at all large, it is to be enucleated to its very base, put upon tension, ligatured or sutured, and resected. The coaptation of the deep structures is conveniently effected by a line of deep double sutures, or a row of running sutures taken deeply through the tissues from side to side. The cord is then replaced and the external structures are coaptated in a similar manner by a row of sutures taken through Poupart's ligament and the conjoined tendon, closing the structures quite down upon the cord and thus restoring the external

ring. The superficial structures are coaptated with continuous tendon sutures. "In a similar manner the skin is closed by a continuous buried suture. The needle, straight or curved, is best held in the fingers and is carried through the deep layer of the skin entering upon the opposite side of the wound exactly opposite its point of emergence in taking the last stitch. This I have called the *parallel suture*, since the needle is carried through the skin parallel to the line of the incision. It will be noted, however, when the points of entrance and emergence are exactly opposite that the suture lies in the wound transversely, and, if for purpose of demonstration, the wound is allowed to remain only partially closed, the suture lies in parallel lines, like the rounds of a ladder, at right angles to the long axis of the wound.

Dr. Marcy carefully dries the parts, dusts with iodoform or aristol, and hermetically seals it with iodoform collodion, reinforced with a few fibres of cotton. An aseptic wound thus treated must remain aseptic, emphasized by the author as follows: "the *sine qua non*," otherwise failure must ensue.

Aseptic sutures, aseptically applied, in an aseptic wound, aseptically maintained.

Dr. Marcy believes these conditions should be accepted as axiomatic in all wounds made in aseptic structures, but that they apply with even greater force to hernia than probably to any other operation, since an unclosed wound necessitates drainage and protective dressings, and wounds of the groin are confessedly the most difficult to maintain asceptic.

Dr. Marcy called attention to another important advantage derived from the use of the aseptic animal sutures when properly prepared and buried in the tissues, The histological changes which supervene have been demonstrated to consist of the proliferation of leucocytes which invade more or less rapidly the suture material, becoming themselves transformed into connective-tissue cells, and ultimately in a measure replacing the suture with a band of living connective-tissue. These changes were first noticed to supervene about the animal ligature when applied to the larger vessels, and many years ago Dr. Marcy instituted a series of comparative, abundantly demonstrating that similar changes ensued along the line of asceptic sutures when buried in well vitalized structures. These conditions of themselves demonstrate the greater value of tendon sutures, since silk, when asceptic, is encapsuled and never replaced by normal structures.

Dr. Marcy regretted the impossibility of treating the subject in extenso, but referred to his work upon hernia,[1] just published by the Appletons, in which this subject is fully discussed.

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[1] Anatomy and Surgical Treatment of Hernia. Quarto, with 66 full sized illustrations. Dr. Henry A. Marcy, A. M., M. D., LL. D., Boston, Mass.

CANCER, AN INFECTIOUS MIASMATIC DISEASE.

IS cancer due to special micro-organism, or is it not rather due to deviation in the normal evolution of the cells composing our tissues? This is one of the questions of the day, well worthy of receiving the attention of investigators, in view of its gravity. It may, in fact, be placed in the front rank of the affections which do not spare. Hydrophobia is not worse; tetanus and septicemia are sometimes cured; cancer, never. Surgery may prolong life, and give ease to the sufferer; it cannot perform a radical cure. It is evident that we do not know what cancer really is, but we feel that we are on the eve of finding out; apparently approaching a knowledge of prevention, if not cure. Normandy appears to be one of the sections of France most liable to this disease; more die from it than from tuberculosis.

The specific cells of Lebert do not satisfy anyone. Neither Cobubunis' theory, which considers that tumors, cancers in particular, are due to fœtal inclusions in the mesoderm of the debris of the ecto or ento-derm, which may remain inactive or under some unknown influence, multiply, proliferate and set up carcinoma. Thus are explained tumors of epithelial nature, that is to say, ecto or ento-dermic growths, arising in a tissue which contains no epithelioma. The objections to this theory are numerous. Why should these inclusions wait for a certain age for evo-

lution? Why do they not always evolve? Why do they not remain local? Dermoid cysts, fistulas by fœtal inclusion, whose origin is undeniable, do not become general. They do not involve, save in exceptions due to excessive volume, any special cachexia.

On the other hand, for some time past, we have known that a greater part of the diseases which come under the notice of medicine or surgery, are due to infections, to external agents, parasites, as in syphilis, tuberculosis, charbon, farcy, etc. These are diseases which, excepting perhaps syphilis, we can reproduce at will. These are all due to micro-organisms. These all evolute according to the same process, beginning first with a wound of the surface, giving access to germs which multiply and form a specific colony. For a time the colony remains localized, by degrees they involve the lymphatics, which may be considered as the "strainer" of the circulation, and accumulate in the lymphatic glands. If they can be suppressed at this time, the organism at large is safe, but, as generally happens, they pass these points, and get into the blood current, and the entire organism becomes invaded, and distant organs suffer. The evolution of cancer does not differ from that of other diseases. At first a local lesion, it proceeds slowly by the lymphatic system and at length invades the entire system. Supposing that the cause of the disease is of the same nature, that cancer is due to a telluric cause; it is only a very probable hypothesis, about to be demonstrated.

Coccidian disease in rabbits, first brought this subject to the notice of pathologists. Rabbits are frequently attacked by an infectious disease which kills the young, and invades the older ones; it consists anatomically in the presence of grayish tumors in the liver, a kind of tubercle enclosing a large number of coccidians. These are oval bodies similar to the ova of the helmuth, and belonging to the protozoa class. They are not inoculable from one animal to another, since the flesh of the rabbits may be eaten with impunity. It is only inoculable after having undergone a transformation outside of the animal. In the rabbit it is a voluminous oval cell with granular contents. Outside of the animal in favorable conditions in sand, air or water between 15° C. and 25° C. it undergoes metamorphosis. The contents separate into four spores furnished with a very resisting envelope. Each spore encloses two falciform and very delicate embryos, which in turn give rise to new parasites in the rabbits which ingest them. It is, in short, a miasmatic disease, recalling malarial infection. Supposing the cancer germ to be of similar nature would explain why attempts at inoculation (direct) have failed. Swallowed with the food the spores pass into the alimentary canal and the epithelial cells of the intestine and biliary canals become infected. The young coccidia, small round bodies, grow and develop into the adult oval parasites. Side by side with this cycle of development, there exists another discovered by Pfeiffer. The round bodies divide into a number of segments which take the form of crescents. These probably serve to generalize the affection in rabbits attacked with the disease, and are the auto-infective agents.

In man there is a similar coccidian disease due to the coccidia of Laveran which show further a flagellar stage, which is not found in the rabbits' germ but which has been seen in the parasite in other animals. An important character of the disease in rabbits, is the tendency to excessive epithelial proliferation in the attacked organs. Therefore Malassez some time ago sought for sporozoids in cancerous tissue. He was followed by others in this line and parasitic psorosperms were described as being found in cutaneous affections and epithelial diseases.

Last year M. Foa, of Turin, described afresh, bodies of parasitic aspect, in cancer cells. In the Annals of the Pasteur Institute, Soudakewitch has mentioned the same forms found in fifty cases of cancer. Foa, Borrell, have found them in epitheliomas. It seems that doubt on the subject is no longer possible. Metchnikoff thinks the parasites of cancer are most easy of demonstration. They resemble greatly, if not entirely, the coccidia of the rabbit. The principal difficulty is that, so far, the falciform stage has not been noticed in cancer. If the coccidia are not directly contagious, they may be so, without the body, but especi-

ally in proximity to it. This might explain the transfer of the disease to the penis, from uterine cancer, the vagina serving as a culture bed. As in all other contagia account must be taken of the soil as well as of the germ. Perhaps this has been neglected in the case of cancer. Evidently the infectious agent may invade all organisms, determining different forms and reactions, sarcomia in the young, epithelioma in adults, or again schirrhus of slow evolution in the aged. But even as in other affections, cancer does not invade all organisms exposed to the cause. It affects some. Why? Biological chemistry may perhaps find an answer.

Cancer, as has been known for some time, is especially met with in arthritic individuals, and the author thinks that probably the prevalence of arthritic diseases, and the inordinate use of acid cider, which by weakening the digestive apparatus, may provide a suitable soil for the parasite, may account for the prevalence of the disease. (As far as Normandy is concerned) whatever be the cause, cancer will soon be classed with the diseases due to infected food.—Francois Hul, *La Normandie Medicale.*

Does the Prevailing Method of Hydrotherapy Need Reform.—The majority of the specialists will negative the above question, as they hold the system to be complete, and not in need of supplementary measures.

Dr. A. Schleicher debates this question in *extenso*. We give his conclusion: In regard to the frequency of the applications, one does not easily believe that too much can be made of a good thing. Too frequent use should be avoided. The fundamental principle is to permit each reaction to run its full course before a new application. The course is not run so speedily as is usually thought. A partial bath (not the whole body) in the morning should suffice for the day; at the most, only light treatment in the afternoon, for instance, the use of a spray. Some interval should elapse between the recurrence of treatment, in short, time must be allowed the organism to utilize the thermic stimulation. What can be expected from thermo-therapy in febrile diseases has been developed by Fröhlich, who shows that the antithermic and antiphlogistic treatment must be dropped, and that the body washings are only permissible for febrile diseases. The duty of the physician is to guard against an over-estimation of the merits of hydrotherapy. We should guard ourselves from one-sided judgments; the water-cure institution should be the sanatorium, in which all the factors of nature-cure can be appropriately estimated. Our criterion must be the great biological law. In weakness, stimulate the vital functions, promote the equal balance and restrain excessive vigor.—*Deutsche Medizinal-Zeitung.*

Erythromelalgie.—Of this disease there have been recorded twenty-six cases. It attacks men of middle age, whose laborious occupations seem to be the predisposing cause. The two principal symptoms are pain and reddening of the extremities; the feet rather than the hands. The attack begins with violent burning pains, soon followed by reddening, heat, and swelling of the affected part. Warmth aggravates the trouble, whilst cold ameliorates it; consequently in summer the symptoms are more intense than in winter. Also laving the member in cold water has a beneficial effect.

A postal guard was suddenly attacked with the disease in both arms, but more painfully in the left; and after the lapse of many weeks the feet were also involved, so that the pressure of the boot was unbearable. Both arms had a feeling of numbness and weakness. The patient, a man previously in the enjoyment of good health, had no fever, neither in the beginning nor during the course (eighteen months) of this attack. On repeated examinations nothing abnormal in regard to the urine or the internal organs was discovered.

It is not improbable that many of the cases classified as erythromelalgic should be classified as chronic, or diffused habitual erythema. We have to consider erythromelalgia as that form of angioneurosis which is the direct opposite of symmetrical local asphyxia of the extremities, or symmetrical gangrene. As to treatment, there is no reliable remedy; faradisation has been tried, as also the application of cold. I have found acetanilide of some use.—Senator, in *Berliner Klinische Wochenschrift.*

SELF-INFLICTED WOUNDS IN HYSTERICAL PATIENTS.—Thiersh tells of a peasant woman afflicted with burns; on arrival at the hospital she had been thoroughly searched, but nothing suspicious was found upon her. Every precaution was taken to prevent her touching the ulcerations, and a cure seemed assured, when new ulcerations appeared. A new transplantation was made, the patient closely observed, but while the bandages seemed undisturbed, pressure spots appeared, and the fact developed that she practiced rubbing over the bandages.

In another case, the patient when accused of preventing the healing of the wounds indignantly denied the fact.

Apropos of the foregoing, we think the general opinion that patients add to their wounds purposely is ill founded. In the case of the peasant woman the abnormal sensations in the thorax, resulting from the burns, induced her to seek relief by rubbing. In these cases of hysteria there is a close analogy to the so-called stigmatization. Louise Lateau, who belonged to the order of Francis d' Assisi, had hemorrhages from her stigmata every Friday. Probably the bladder-like appearance she showed on her hands and feet were of the nature of pemphigus hystericus. The conjecture seems well-founded that in the case of the stigmatics there is question of the concurrence of hemorrhagic diathesis with hysteria.—*Prager Medicinische Wochenschrift.*

CLINICAL FORMS OF PERNICIOUS CHOLERA, DURING THE EPIDEMIC OF 1892 IN PARIS.--Galliard classifies the cases, based on the rapidity of their evolution, in three classes.

1. The malignant (foudroyant) form, that which kills in twenty hours at the furthest, but which may be prolonged or even cured by the intra venous injection of Hayem's serum.

2. The galloping form, which kills in five days at most, but which also may be prolonged, and sometimes even cured by transfusion and sometimes without. This galloping form should be considered, according to Galliard as the type of the epidemic of 1892. This differs from the first variety principally by the fact that it is more amenable to treatment, on account of leaving more time to act.

3. The slow form, three varieties:—
   (*a*) Gastro-intestinal, the one curable form of this class.
   (*b*) Ataxo-adynamic, always mortal.
   (*c*) Marantic, also mortal.

This slow form may last three weeks. The termination may be either by a state of peripheric algidity (with or without central hypothermia) or by congestion of the nervous centres, or from a complication, such as pneumonia.

The exanthem of cholera popular erythema) comes on on an average about the tenth day. It has no prognostic signification.

Galliard attributes three cures to transfusion, in the malignant form; and estimates that thirty of his patients have been saved by this means. None of them had more than two transfusions, whilst in the fatal cases, the injections often exceeded two, and in one instance six were given.

The 397 cases observed offered the following clinical particulars.

1. Not a single case of cholera sicca.
2. Premonitory diarrhœa often wanting in rapid cases.
3. The greater number of patients being in the collapsed stage it was often impossible to recognize the succession of the classical periods.
4. In the collapse, beyond the classical symptoms there was noted painful contractions of the scrotum, a symptom which seems to have been passed over unnoticed, by authors generally. Very low rectal temperature, also observed at this time.
5. The terminal asphyxic phenomena existed in a large number of cases.
6. Cardiac weakness appeared to be constant.
7. Nervous phenomena frequent.
8. Congestive symptoms were developed several times, generally in the brain and membranes; the lungs, generally escaping the complication.
9. Reaction did not conform to the classical descriptions, *i. e.*, coming on spontaneously, but was the result of violent therapeutical perturbation by intravenous injections, but then it was complete; revival, restoration of the central functions, return of speech, urination, pulse, and temperature.
10. The typhoid reaction of authors was not observed.—*La Medicine Moderne.*

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PAGE

ORIGINAL ARTICLES:

TYPHOID FEVER AS RELATED TO THE NERVOUS SYSTEM. By Samuel Wolfe, M. D. 673
THE DIET IN TYPHOID FEVER. By William F. Waugh, M. D. 675
SOME COMPLICATIONS OF TYPHOID FEVER. By Prof. Grancher 678
SOME THOUGHTS ON TYPHOID FEVER. By E. Chenery, M. D. 682
THE TREATMENT OF TYPHOID FEVER. By Herman D. Marcus, M. D. 684

EDITORIAL:

TYPHOID FEVER. 686

THE TREATMENT OF TYPHOID FEVER IN THE PHILADELPHIA HOSPITALS:

St. Agnes Hospital 688
German Hospital 688
St. Mary's Hospital 689
Presbyterian Hospital 689
University Hospital 690
Children's Hospital 690
Woman's Hospital of Philadelphia 690

LETTERS TO THE EDITOR:

Typhoid Fever. *W. S. Cline, M. D.* 691
Treatment of Typhoid Fever. *J. D. Cole* 691

THE MEDICAL DIGEST:

German Notes. (Translated by *Herman D. Marcus, M. D.*) 692

NEWS:

The Only Known Sterilizing Apparatus 693

NOTES AND ITEMS ..... iv, x

Original Articles.

TYPHOID FEVER AS RELATED TO THE NERVOUS SYSTEM.

BY SAMUEL WOLFE, M. D.

[Prof. of Physiology, and Diseases of the Nervous System, Medico-Chirurgical College, Philadelphia.]

AFTER those which are directly due to the enteric lesion, the symptoms which arise in this disease, are almost wholly referable to the nervous system. So prominent indeed, is this line of expression, that nervous fever was for a long time the name under which the malady was known.

From a practical point of view, it is important that the significance of these symptoms should be understood. They have diagnostic importance throughout, and frequently are amongst the earlier diagnostic criteria. They influence materially prognosis, and largely determine the course of the attack. They afford, often, valuable indications for treatment.

The continuous headache, the weariness of the limbs, the depression of spirits and the general aching, bring patients to the notice of the practitioner in the prodromic period, quite as often as do diarrhœa, or abdominal tenderness, and frequently the former are the guides to the examination which reveals the latter.

Long before the rose colored spots and the doughy feel and gurgling sensation of the right iliac region have given a final confirmation, the physician has generally risked a positive statement of the nature of the case, based mainly, often wholly, on the complement of nervous symptoms presented.

The occurrence of delirium, its extent and character, the capacity for sleep, the muscular power, the tendency to adynamia are as anxiously regarded as the state of the alimentary canal, and as much relied on for a basis of opinion as to the duration and outcome.

In estimating the nature of the affection, we must not allow ourselves to be misled by the prominence of the nervous symptoms, into forgetting that they are secondary in occurrence. We must rather see in it, the ultimate relation of the blood (in which it may be assumed that the primary changes occur) to the nerve tissues.

No other tissue has so complex achemical composition. From no other can so many different chemical substances be obtained. The highest degree of delicacy of structure, complexity of composition and elaborate organization, necessarily connects itself with the most intimate relations, and with the most constant dependence on the nutritious supply. A toxic principle within the blood and lymph channels is equivalent to the presence of the same in the nervous tissues. Any incapacity on the part of the blood, to properly supply nutritious material or to adequately remove waste matter, will most quickly be resented by the nervous system.

To the common causes, all parts are equally exposed—centres, peripheral end organs and connecting fibres. The sum total of the nervous symptoms may then be regarded as depending on:—

1st.—The presence in the cells and fibres of the virus, which is the essential cause of the disease.

2nd.—The changes in metabolism of the nervous tissues, due to alterations in the blood and other organs.

3d.—Grosser (organic) changes resulting from the above causes.

4th.—Organic changes due to continued high temperature.

I will consider the last division first, since nothing in what has preceded gives the ground on which it rests.

Among the many (about fifty) different chemical bodies which have been obtained from the nervous system is amidomyelin. This body, when obtained in a clear watery solution, will coagulate when heated to 107 F. Here, then, is a change of state, resulting from a temperature occasionally reached in typhoid fever. Such a change as this may be altogether impossible while this substance is in the relations in which it exists in the living body, and, even granting that it may occur, may have no special effect on the function of the part in which it is found. But it is far more rational to draw a different conclusion, and to believe that deleterious changes may occur, which are the result of abnormal temperature, within the limits wherein they are so gross that they are demonstrable in the chemical laboratory, when they are tested by the infinitely finer reactions of living protoplasm. Nor is it necessary to suppose that the prejudicial effect of high temperature falls only on this one constituent, when many of them rest for their normal balance on very delicate conditions. Clinical observation has long ago settled the connection of long continued high temperature with danger to life, and has, at the same time, coupled this danger with interference with the function of the higher nerve centres. I wish here to introduce a word of caution. While hyperepyrexia (105° and upwards) affords an undoubted indication for treatment, and may warrant resort to special and heroic measures, the routine introduction of the depressing antipyretics, such as antipyrin, antifebrin, etc., in cases where the temperature remains under the mark above indicated, has always seemed to me injudicious. A drug which reduces temperature, but nothing more, may do good when the temperature is what threatens to destroy the nervous system, but it must not be forgotten that when this is not the case, it may deprive this very organ of certain resisting influences, which are inherent in moderate elevation, and which defend against the destructive tendencies of the conditions embraced in my first three classes of causes.

The presence of the specific toxic principle, it may be supposed, alters the constitution of the nervous element, and hence affects its molecular activity. While it is impossible to speak in the present state of knowledge, in precise terms, of what we mean by molecular action, I take it that in the minds of most men it stands as an idea for the mode in which the ingredients of a definitely constituted body react upon each other in order to maintain that definite constitution. Altering that definite constitution by the addition of another ingredient would necessarily change the molecular action, according to this view, and if function is the result of molecular action, then it would mean alteration of function. A living cell must be looked upon as normally capable of ready change in its chemical constitution, and hence, so to speak, of ready functional change from rest to activity (for rest is a normal function, as well as activity). Following out this thought it is easy to conceive of functional disturbance in case of the introduction of a foreign or new element into its chemical composition. Such disturbance may associate itself with both the functional phases of rest and activity and hence is closely allied to the metabolic processes.

Metabolism in any tissue involves the functions of the blood and lymph, absorbing their power of replenishment and removal. It is readily seen that failure in this direction, must result in a condition analogous to that above described, deviation from the normal constitution, and that the consequence must again be alteration of function. The work of the blood in effecting metabolism implies its normal composition. The known alterations of this fluid in typhoid fever may be appealed to in support of my second proposition. It is a significant fact, that sluggish bowels are often present in the graver types of nervous complications in this disease, and the explanation very probably lies in the absence of

active elimination from the blood of both the poison of the disease and the autogenetic products of nervous katabolism which consequently accumulate in the nervous system.

The efficiency of typhoid fever as a cause of chronic disease of the nervous system, which involves the presence of degenerative processes, may be mentioned in support of my third proposition. It is impossible to escape the conviction, that where such results do not follow, slighter organic changes have occurred, if we regard thoughtfully the protracted convalescence, the slow return of muscular power, the continued apathy and the correspondence of the period of restoration with that of complete nerve regeneration.

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THE DIET IN TYPHOID FEVER.

By WILLIAM F. WAUGH, M. D.

ACCORDING to Hoffman,[1] the salivary glands in typhoid fever exhibit almost constant alterations. In the first week they are denser and firmer, brownish-yellow and tense. The septa are like cartilage, and creak on section. The acini are filled with closely crowded, very large, multi-nuclear, granular cells. Later on numerous fatty granules appear in these cells; they become turbid, lose their sharp outlines, and a part breaks down. The glands then become redder and softer, and the tension diminishes. It seems then that we have here a parenchymatous degeneration, differing from analogous processes in other organs only in that an increase of the cells precedes the degeneration.

These changes, in which all the salivary glands participate, explain the scantiness of the saliva. The pancreas also exhibits perfectly analogous changes.

The secretion of bile is often markedly diminished. The hepatic cells become granular, the nuclei disappear, and fat globules are visible. In bad cases the cells break down into granular, amorphous detritus. In 174 typhoid livers Hoffman found only thirty-eight presenting little or no change; while all the others showed marked degeneration and destruction of the cells, or marked new growth. The secretion of bile is often quite scanty, as may be inferred.

[1] Ziemssen's Cyclopedia, vol. I, p. 113.

In the intestines the affection of Peyer's patches and of the solitary glands is acknowledged to be the characteristic primary lesion of the disease. But the remaining tissues of the bowel do not wholly escape. In the first week the mucous membrane is hyperemic and swollen, even before the infiltration of the glands appear. This latter process does not occur simultaneously in all the glands, as in the fourth week we may find, in the same intestines, ulcers cicatrizing, others with adherent sloughs, and fresh infiltrations. Nor do all the affected glands undergo necrosis, for even in the severer cases, at the end of the second week, resolution sets in in the patches not already devitalized.

It is necessary also to remark that all the glands are not affected by the morbid processes. In a large number of cases the solitary follicles entirely escape; in many others those of the ileum are alone attacked, and when those of the large bowel suffer it is often only in the cœcum or in the ascending colon. The same thing is observed of Peyer's patches; the highest of them are very seldom, if ever, affected.[1] No special lesion of the stomach is described by Liebermeister, Strumpell or Fagge. Wilson says that this organ is in many cases healthy, but occasionally it is the seat of hyperemia, softening and superficial erosions of the mucous membrane.[2] The secretion of the gastric juice is, however, partially or wholly suspended, as is the case with the other digestive secretions.

The condition of the digestive system during an attack of typhoid fever, as shown in this brief sketch, warrants our first proposition; that during the course of this fever the power of digesting food is impaired, always seriously, and sometimes almost entirely lost; from the morbid processes going on in the tissues of the digestive tract, and from the suspension of secretion.

My second proposition is, that food that will not be digested in the stomach or bowels of a typhoid fever patient, is not only useless but harmful; as in the absence of digestion, decomposition is certain to occur, with the production of

[1] Fagge's Practice, vol. I, p. 200.

[2] The Continued Fevers, p. 203.

substances that are certain to be injurious to the patient. I must refer to this cause the tympanites that occasions so much trouble in improperly fed cases. I am assured by the results of numerous observations that this symptom does not become prominent, or even noticeable, when the diet is properly guarded.

The conclusion is, that in typhoid fever the stomach and bowels should not be looked upon as digestive organs, but simply as receptacles for food that has been previously digested.

That absorption may take place cannot be denied. The whole gastro-intestinal mucous membrane is adapted for absorption. Saline solutions, grape sugar and peptones, are absorbed from the stomach. The most active area for absorption is the upper half of the small intestine—the section least affected in typhoid fever. While this absorption is diminished by the presence of catarrh, it is not entirely lost. But as the catarrh, as well as the graver affection of the intestinal glands, become more marked as we proceed downwards from the stomach, the indication becomes very clear: that in typhoid fever we should employ such food-principles as are absorbed from the stomach and the upper bowel. Our list, then, of available foods, comprises water, salts, peptones, maltose and dextrose; while casein, egg-albumen, dextrin and gelatine are not absorbed with the same readiness. As fatty substances are principally absorbed by the lacteals, but little of these can find entrance to the system.

We now come to consider the application of these principles in practice. In France, the obstacles to digestion and absorption appear to be exaggerated. Assuming that only salts and water can be absorbed, and that the patient practically lives upon his tissues, Dujardin-Beaumetz returns to the Hippocratic diet, of water-soup.

Liebermeister insists on the importance of giving abundance of water. He objects to the proteids, and falls back upon the carbo-hydrates, barley-water, oatmeal gruel, and weak meat-broth. Milk may be given, if boiled and diluted. Later in the attack, the yolk of an egg may be added. Very feeble patients may have beef-tea with claret, or perhaps Leube's pancreatized beef enemas.

Strumpell recommends milk, with coffee, brandy, or cocoa added; Nestle's milk food; broth thickened with rice or sago; zwieback; with an egg or raw beef for very feeble cases. Beef tea is strongly recommended. Meat peptones may be sometimes useful.

None of the writers quoted appear to have had a clear conception of the pathological conditions present, or of the physiology of digestion. Soups depend on gelatine; milk on casein; the yolk of eggs on albumen and fat; the carbo-hydrates mentioned on unconverted starch; beef tea on innutritious extractives. None of these are suited to the conditions present. Liebermeister is right in insisting upon the liberal use of water. The digestion is thereby improved, and the emaciation largely prevented. If patients do not ask for it, water should be given systematically, in stated quantities. Milk should be administered only when predigested. Recently I have employed the Fairchild peptonizing powder, and with good results; better than when employed for children's diet. Kumyss is better still, when some stimulant is required. The raw white of egg, treated with pepsin, and dissolved in ice water, is always acceptable. As this is wholly digested in and absorbed from the stomach, it is especially applicable. Junket, milk digested with rennet, comes under the same category. To these I will add two of the manufactured foods—Bovinine and Carnrick's Infant Food. I do not wish to be understood as condemning other foods of this description, but simply to state that my experience has been largely confined to these two. I began their use years ago, and the results have been so satisfactory that I have not found it advisable to experiment with others.

Notwithstanding the hebetude in which the patient is wrapped, he will often note the nature and taste of the food offered; and for this reason, as well as others, it is best to vary the articles given. It is my custom to alternate the use of the Carnrick's food, peptonized white of egg, and junket, giving a cupful of either every two hours, in alternation, and with each one a small quantity of Bovinine; from ten drops to a tablespoonful, generally a teaspoonful. This may be given in the other food, or in a little porter sangaree. Another most useful article is coffee, made with milk instead of water. With

this a dose of pepsine must be given, say a teaspoonful of Procter's wine. The Carnrick's food consists of milk already digested, and of soluble carbo-hydrates ; so that all its elements can be absorbed speedily from the stomach. The Bovinine consists of beef's blood, egg albumen, whiskey and glycerine.

The action of this food is peculiar, and somewhat complicated. As a food, nothing is so readily absorbed as egg-albumen and blood, as nothing comes so near the composition of the human blood. The glycerine assists in keeping the bowels soluble ; the whisky is a useful stimulant and the boric acid assists the antiseptic remedies with which most practitioners now treat typhoid fever. But there is something more than this in Bovinine. Some years ago I mentioned this, and called attention to the fact that in blood we have a substance that has been not only digested and assimilated, but *vitalized.* It is a living fluid, whose existence is identical with that of the individual in whose arteries it flows. I speak simply as a clinical observer ; but I feel sure that when the science of biologic therapeutics has progressed a little farther, we will be furnished the reasons for my present claim, that there is in blood, as a food, a value not wholly explicable by its chemical composition. Stern has shown that human blood-serum is destructive to the Klebs-Eberth bacillus, and that the serum of persons convalescing from typhoid fever has an attenuating effect upon the toxicity of typhoid bacillus cultures. The effect of the serum of animals insusceptible to typhoid fever seems to be the next step for investigation.

The net results of the application of the diet herein recommended are these: 1. Avoidance of the gastro-intestinal irritation due to undigested food. 2. The sustaining of the patient's strength, by really feeding him (as distinguished from the mere placing food in his stomach), and the consequent avoidance of collapse, and all the long train of ills that come from mal-nutrition. 3. The avoidance of the excessive emaciation so often seen after protracted attacks of typhoid fever. 4. Shortening of the convalescent period. 5. I put forward, tentatively, my impression that the secondary degenerative lesions of muscles, nerves, and other tissues, are not wholly due to continued high temperature, but, in part at least, to innutrition; and that these lesions are not nearly so marked when the patient has been fed upon the system herein advocated.

TWO ILLUSTRATIVE CASES WITH PECULIAR SYMPTOMS.

In the latter part of August, a young man employed at Cramp's ship-yard applied to me for relief from a severe pain in the head, following a heavy blow on the left temple. The pain was most severe at the site of injury, and close examination detected a slight depression of the frontal bone at that spot. The pain did not subside, although he was confined to his room and kept on low diet, with cold to the head and arterial sedatives. In a few days fever manifested itself, worse at night, with a slight tendency to delirium, together with tympanites, some diarrhœa, tenderness in the abdomen, anorexia, and a typical typhoid tongue; "small, pointed, red at the tip and edges," with a tendency to dryness, and brownish along the middle. The typical typhoid spots appeared a few days later, and the urine responded to Ehrlich's test. The onset of the specific fever had been masked by the symptoms resulting from the very severe injury received on his temple. This accounts for his not being placed on the sulphocarbolate of zinc at the beginning of the attack. About the fifth day of the attack he was placed on this treatment; his temperature at that time being nearly 105° in the afternoon. He was given one of Upjohn's 2½ grain, keratin coated pills every two hours, until the stools became natural; after this he took the pills every four hours until the temperature returned to normal. The usual results followed the administration of the zinc salts; the temperature fell to 103°, and never afterwards exceeded that height, ranging from 101° to 102.5°, as a rule. The abdominal symptoms subsided, and were not marked during the rest of his illness. The headache became less after the first week, but did not entirely leave him until convalescence was fully established. Successive crops of rose spots appeared.

The patient was under treatment for thirty-two days; so that the duration of the case was not materially shortened, although its severity was much amelior-

ated. During the first three weeks he took scarcely any nourishment excepting Bovinine, of which he was given a teaspoonful every two hours, night and day.

About the end of the third week he began to take peptonized milk and Carnrick's food; and these two articles were continued as long as he was confined to his bed. There was not nearly as great a degree of emaciation as is usual after attacks of typhoid fever lasting nearly five weeks.

On November 17th, six weeks after he was discharged from treatment, he reported, looking and feeling very well. The pain in the temple still tends to recur on any undue excitement; and he has consequently been advised not to return to his work until all cerebral uneasiness has disappeared. He is, however, able to fully enjoy a day with his gun and dog, without any unpleasant symptoms appearing.

November 3d, I made my first visit to Kenneth Waer, aged thirteen, living at Gray's Ferry. He had then presented symptoms of typhoid fever for nearly a week. His temperature was 104° in the evening, pulse 120 and dicrotic, though not specially weak. He had but little diarrhœa, but the abdomen was some what distended, and tender at the right iliac fossa. The tongue was small, dry, pointed, red at the tip and edges. Two rather doubtful spots were detected on his abdomen. The urine responded rather obscurely to Ehrlich's test. The temperature was not taken systematically, but what records were made corresponded to the typhoid type; the fever was always higher towards evening. It was looked upon as a doubtful case, the probability leaning towards typhoid fever. He was placed upon the sulpho-carbolate of zinc, gr. ij. every two hours, afterwards every three hours. On November 22d, he was discharged as well; the temperature having been normal for several days. During the entire attack he was fed on Bovinine and Carnrick's food, with a little coffee. The temperature never reached 103° after the zinc salt was given. The boy is still weak, but has lost scarcely any flesh, and is with difficulty kept in the house. (This is the report on November 22d).

This is a typical case of a numerous class. They look like typhoid fever, more than anything else; indeed, if they are not typhoid, one is at a loss how to classify them. They are not malarial, nor are they due to any local affection discoverable by examination during life; and as they all recover, autopsies are not available. Nor are they influenza; as such cases were often se n before the influenza epidemic; and they do not present the peculiar features by which *la grippe* may be recognized even in his protean disguises. Previous to the use of sulpho-carbolate of zinc, cases similar to these usually developed into unmistakable typhoid fever. At present, we must be content to call them "probably" typhoid, until we can verify the diagnosis by bacteriological tests. At any rate, they recover, *tuto, cito, et jucunde*, under the sulpho-carbolate treatment.

SOME COMPLICATIONS OF TYPHOID FEVER.

By PROFESSOR GRANCHER,*
Paris, France.

I PRESENT to you to-day a boy of twelve years recovering from typhoid fever. During the evolution of the disease, two interesting complications have occurred; a suppurative synovitis and a phlegmasia alba dolens.

This boy was sick from the beginning of November; he complained of headache, weariness; there was loss of appetite. On the 10th of November, the symptoms increased; he had to take to his bed. His state grew rapidly worse; nausea, vomiting, diarrhœa set in; a very intense fever developed; he was brought to the hospital and admitted, ward Bouchut, on the 13th of November.

On the 14th the little patient is found in the following state: slight prostration, tongue tremulous, red at the borders, white in the middle, coated; his nostrils are encrusted; there is nothing in the throat No nausea, no vomiting. Slight diarrhœa; the abdomen is rather retracted than ballooned; both iliac fossæ are tender on palpitation; the spleen is enlarged. Bronchitic rales are heard over both lungs; the heart is normal, the pulse regular, non-dicrotic (100 pulsations.) There is no albumine in the urine.

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The diagnosis of typhoid fever is then made and confirmed in the following days. Rose-colored lenticular spots appear. The prostration increases. The temperature oscillates about 40 C. (104° F.)

The treatment consists of mild purgatives, given in daily enemata; every day from 1.0 to 1.5 grm. sulphate of quinine are administered; later on, salol (1 gramme).

The disease follows its usual course without exhibiting anything abnormal. From the 21st the temperature began to come down, wavering, however, between 38° and 39° C. ($100\frac{2}{5}$ to $102\frac{1}{5}$° F.)

On the 24th an incident occurs. The boy complains of pains in the lower limbs (thighs and legs). These pains continue on the following day, vague, not localized, only on the 26th, there is found, at the level of the left instep, a slight redness of about three fingers breadth. Pressure is painful at that point; the motions of the toes enhance this pain.

The temperature still oscillates between 38 and 39° C. The general state of the patient is less good.

In spite of the use of mercurial ointment, the inflammation at the back of the foot progresses; pus collects in the tendinous sheaths. On December 4, fluctuation having become evident, an incision is made into the purulent focus. An examination of the cavity with a probe shows that the bones are intact and that we are dealing with a suppurative synovitis.

The examination of the pus made by Mr. Veillon, my laboratory chief, shows that the bacillus of Eberth was alone in the purulent collection.

Recovery was soon complete. No other complication was noted till on the 9th of December. For several days past some irregularities, on the side of the heart had been observed; they were, however, but transitory, merely functional disturbances. On the 9th of December the temperature, which was normal the preceding days, rises in the morning to $37.6°$ C.($99\frac{5}{10}$°F.), and to 38° C.($100\frac{2}{5}$°F.) in the evening. The boy feels some pain in the left thigh.

On the 10th of December the thermometer records 39.4° C. (103° F.) in the morning, and $40.3°$($104\frac{2}{5}$°) in the evening.

The pain in the thigh has increased; on palpitation a hard string is felt, formed by the obliterated internal saphenous vein. Pressure is painful at that spot. We have to deal here with a phlegmasia alba dolens. The sore limb is put in a grooved splint.

On the 11th, the temperature rises to $40.7°$ C. ($105\frac{1}{5}$ F.) in the morning and to 41° C. ($105\frac{4}{5}$ F.) in the evening. On the following days, the same state of things prevails, the phlegmasia does not increase but the general condition gets worse. Prostration again appears. The tongue becomes coated anew. Diarrhœa sets in and on the 15th, rose-colored, lenticular spots are found on the abdomen.

The boy has had a relapse of typhoid fever. This relapse behaves fairly well; it is slight, for as early as on the 17th, the temperature falls to 39° C. ($102\frac{1}{5}$ F.) and gets gradually still lower. It reaches 37° C. ($98\frac{3}{5}$ F.) on the 19th, to stay henceforth normal, except once, on the evening of the 22d, when, doubtlessly on account of some fault of diet, it reaches $39.6°$ C. ($103\frac{1}{5}$ F.)

The phlegmasia gradually disappears. On December 28th, the string formed by the saphenous is felt only at the level of the knee. The splint is taken off.

To-day, January 6th, 1892, the recovery is about complete.

Here, then, we have a boy of 12 years of age who in the course of a typhoid fever of an average intensity, gets up first an abscess of the tendinous sheaths of the dorsum of the left foot, the pus of which containing but Eberth's bacillus, then a phlegmasia alba dolens, which still persists, at the level of the knee, in the shape of a hard string, and which obliges us to be very cautious. The patient has had moreover a relapse, characterized by fever, an aggravation of the general condition, by rose-colored spots and diarrhœa.

The case of this patient allows of certain developments which I think useful to impart to you. First of all, is suppuration a frequent symptom in the course of typhoid fever, and do we understand this phenomenon well? In this case, the suppuration of the tendinous sheaths was solely due to Eberth's bacillus. This bacillus then does not cause only typhoid phenomena; it is sometimes

pus producing. But we must know that the suppuration, so frequent in the course of typhoid fever (osteoperiostitis, abscesses of the cellular tissue and so forth) are often depending on the ordinary microbes of suppuration, the staphylococcus pyogenes aureus, for instance. It is very important to distinguish these different causes of suppuration, one from the other.

You easily perceive the utility of this distinction; you understand that it is not an indifferent thing that a typhoid fever patient should get up an abscess from Eberth's bacilli in the course of a disease, at a moment when one had the right to think him entirely cured. This persistency of the infection is interesting to note. There is something peculiar here, not unlike recurrent erysipelas.

Cases of suppuration from Eberth's bacilli are not rare. In a communication made to the *Société medicalé des hopitaux*, (February 20, 1891), in reference to a typhoid fever case, complicated with an abscess of the abdominal wall from Eberth's bacilli, Dr. Raymond has collected most of the cases of this kind published during the last years.

The first is that of A. Frænkel, who found Eberth's bacillus, exclusively of all other bacteria, in a focus of encapsulated peritonitis. Travel observed the same condition in a case of suppurative orchitis, occurring during a convalescence from typhoid fever. Roux and Vimay have studied an abscess of the spleen, in a typhoid fever case that died on the 18th day. Plate cultures revealed the exclusive presence of Eberth's bacillus.

Martha has published two cases of osteoperiostitis, due to Eberth's bacillus; no cultures having however been made, these cases can hardly be adduced as proofs. Valentini has found the same microbe alone in a subperiosteal abscess of the tibia, and in the pus of a suppurative pleurisy; Ebermayer, in two cases of suppurating periostitis of the tibia; Orloff, in a periostitis, eight months after a typhoid fever; Kamen, in a meningitis complicating typhoid fever; Colzi, in an osteo-periostitis of the tibia; finally, Ochalme has published a very complete observation of a typhoid fever patient, who, during his convalescence, had an osteo-periostitis of the tibia, caused by Eberth's bacillus alone.

The enumeration of these cases shows that all the tissues may be attacked, since cases of peritonitis, orchitis, pleuritis, meningitis, osteo-periostitis, have been observed, all due exclusively to Eberth's bacillus. Of all those complications, the osteo-periostitis of the tibia seems to be the most frequent. The objection was of course raised, long even before these cases were published, that it has not been proved that Eberth's bacillus alone is capable of producing pus; that, if other pyogenic microbes have not been found in those cases, it was because they had disappeared, after playing their part, and that Eberth's bacillus was added afterwards.

Demonstrative experiments have answered this objection. Gilbert and Girode (Société de biologie, 1891.) have caused a purulent peritonitis by injecting into the skin of the back of a guinea-pig a centimeter cube of a broth culture of Eberth's bacilli. The cultures obtained allow us to state that the peritoneal pus contained but one microbic species, that of Eberth. The experiments of Roux, Chantemesse, Gasser, Orloff, Colzi had previously demonstrated the pyogenic properties of Eberth's bacillus. Nay, even when dead, this bacillus can produce pus, as Orloff has observed; in this it would resemble the bacillus of tuberculosis. The pyogenic qualities of Eberth's bacillus cannot therefore be doubted.

This micro-organism can persist for a long time in the tissues it has invaded, and its presence explains the possibility of successive relapses of typhoid fever, at a date remote from the onset of the disease. We thus understand the cause of those recurrent autumn fevers which formerly could not be satisfactorily accounted for. One of the most curious cases, in this respect, is that of a patient of Dr. Chantemesse (Societé medicale des hopitaux, July 12, 1891). For five months he could not get rid of his typhoid fever and had a relapse, with rose-colored spots, every time his convalescence began.

Dr. Chantemesse, in reference to this patient, inquired how long the typhoid fever bacillus could live within the human body. He stated that it was unhappily impossible to indicate the utmost limit beyond which the typhoid virus would cease to be living in the patient's organ-

ism. The limit of six to eight weeks from the outset of the disease, true in the majority of cases, does not imply that the bacillus has always so short an existence.

In a case published by Orloff, Eberth's bacillus was discovered, six months after the beginning of typhoid fever, in a state of purity, in a focus of a very painful periostitis of the tibia. This focus was formed by a grayish granulation tissue. Eberth's bacillus has not produced pus in this case, but a granular tumor. Suppuration is moreover pretty rare in consequence of typhoid periostitis, as Dr. Barrié has observed, in the discussion following Dr. Chantemesse's communication. According to Dr. Rendu, there is suppuration whenever the process is rapid; there is none, if it is slow.

In a personal case of his, Dr. Chantemesse has observed an osteitis of the tibia; in a man of twenty-nine years, three years after a typhoid fever. The bony lesion may have been due to the typhoid bacillus, but this lacks proof.

It cannot be stated precisely how far visceral complications, following a long time after typhoid fever, depend effectively on the presence of Eberth's bacillus in the organism. It is certain, however, that some typhoid fever patients harbor bacilli for months, and are thus liable to complications more or less severe.

Does this mean, as Dr. Chantemesse thinks, that in those cases, typhoid fever has an evolution like that of a chronic disease? No; those typhoid fevers with late complications are recurrent diseases due to a latent infection; it is not exact to call them chronic diseases.

Eberth's bacillus does not only produce pus; you have already seen that in Orloff's case, it had caused a granular subperiosteal tumor. Dr. Fernet has presented to the *Société medicalé des hopitaux* a patient in whom a typhoid fever followed immediately a sero-fibrinous pleurisy, the exudate of which contained but the bacillus of Eberth. Hence Dr. Fernet wondered whether one could not establish a group of pleuro-typhoid diseases, analogous to the pneumo-typhoid. Such is also the opinion expressed by Dr. Talamon, who has reported two cases of typhoid fever following in the wake of a serous pleurisy.

Eberth's bacillus does still more, as you may have felt convinced by examining little Louisa Masson, nine and a-half years old, admitted into ward Parrot, No. 25, on the 16th of November. Whilst all the symptoms of a severe typhoid fever were found in this little girl, the fact was also noted that the heart was beating very rapidly, with a fœtal rhythm (136 pulsations). These phenomena were disquieting; they indicated a weakness of the cardiac contractions; you know well of what import the state of the heart is for the prognosis. I would rather have a typhoid fever of 40°, 41° C. of temperature and regular energetic cardiac pulsations, than a typhoid case with a low temperature, but with cardiac contractions that are irregular, or have the fœtal rhythm.

The existence of the fœtal rhythm in the heart showed a change in the cardiac function and made us dread a quick or sudden death, as it often happens in the course of a myocarditis. No mishap did however supervene: the heart of our little patient gradually grew stronger; convalescence set in pretty rapidly and followed its course, without an accident.

To-day the child is cured, but a cardiac hypertrophy is remarked that did not exist before her typhoid fever. The apex is beating in the fifth interspace, instead of in the fourth. This hypertrophy adds to the probability of the diagnosis of myocarditis which we have made during the access.

Now the question comes up whether Eberth's bacillus can cause a myocarditis. Dr. Chauffard, in a clinic on myocarditis of typhoid fever thinks that the heart lesion does not directly depend on Eberth's bicilli, but on the products of their secretion; this would mean an intoxication. He has however adduced no proofs of this view. I confess that, on account of the early time in which the accidents set in, I understand the lesions of the myocardium better by the localization of the bacilli in the cardiac fibre, than by the action of their toxine.

Bacteriological investigations have so far been made very incompletely. The alterations of the cardiac fibre have indeed been studied histologically, but the microbes have not been looked for in those cases in which the heart is soft, of

the color of a dead leaf. Rattone of Parma, in 1888, has published a paper on this subject. He says he has seen in the vessels of the heart, infiltration, of bacilli. We are therefore obliged to admit that Eberth's bacillus may locate in the heart; there is nothing astonishing in this, since it wanders everywhere,

It can also cause orchitis and phlebitis; it is possible that in our first patient, the phlegmasia alba dolens was due to an arrest of those bacilli; on the walls of the internous saphenous vein.

Eberth's bacillus moreover can cause typhoid infections outside of typhoid fever. A report by Charrin, (Société medicalé des hopitaux March 17, 1891,) is very convincing in this respect. It was about an adult who had died of a hemorrhagic pleurisy. The liquid contained but Eberth's bacillus. There were no intestinal lesions present, no swelling, no turgescence of Peyer's patches. It was a case of typhoid infection without intestinal lesions. It is probable that, in this case, Eberth's bacillus had not gained entrance through the intestine, but in some other way, through the lungs perhaps.

Dr. Vaillard describes a mixed infection from the typhoid bacillus and the strepto-coccus (strepto-typhoid septicæmia,) setting in with the symptoms of a rapidly progressing typhoid fever of a very severe type. The infection may be mixed from the start, or become so secondarily. The strepto-coccus enhances the virulence of Eberth's bacillus to such a degree that the latter is able to produce intestinal lesions in animals. "If one takes three animals, inject into the peritoneum of one a slight dose of streptococci, into that of the second a slight quantity of typhoid bacilli, these animals are ill for a day or two, but recover rapidly; the third one, which has received a mixture in equal proportions of both cultures, quickly dies, often with the symptoms of stupor, diarrhœa, fever, and the small intestine is seen at the autopsy studded with prominent vascular patches."

I may seem to wander away from clinical teaching in recalling these facts, and yet this is clinical.

To resume, we started from the fact that there are typhoid abscesses, and we have seen that Eberth's bacillus can cause all kinds of lesions, bone suppurations, subperiosteal gummata, simple sero-fibrinous, purulent pleurisy, outside of typhoid fever, a hemorrhagic pleurisy, lastly, a special infection, when Eberth's bacillus is associated with the streptococcus.

What conclusions shall we draw? That Eberth's bacillus, like most pathogenic microbes, produces lesions absolutely dissimilar, though depending on the same cause. This cause ought always to be investigated; it should form the basis for a classification of diseases. It would be easy to draw up the account of streptococcia, pneumococcia, and so forth.

I do not intend to continue further these considerations but I wish to impress upon your minds the fact that Eberth's bacillus can live a long time in the organism, eight months at least. We thus understand the relapses and the recurrences of typhoid fever, we know that they are due to the bacillus which has continued in a latent state in the organism. In one word it is a bacillus of which one must beware.

SOME THOUGHTS ON TYPHOID FEVER.

By E. CHENERY, M. D.,
Boston.

BARRING what we know and do not know on the germ etiology of typhoid fever and its specific treatment by anti-microbic remedies, I wish to say that there are three points in the management of this grave disease worthy of general observance. The conservation of the strength; the avoidance of irritants to the alimentary tract; and supplying plentiful diluents for the work of the kidneys.

I think it stands to observation that nutrition is practically suspended and continues so till the crisis is past and convalescence begins. If that be so, we can hope for very little from feeding, and must see that every particle of strength which the patient naturally has is conserved by keeping him in bed and still, and excluding all reducing measures. And, further, I would ask, have we not often injured typhoid patients by

crowding them with food substances with the idea that we were keeping up their strength, when those substances were themselves more irritating than nourishing? Even milk, crowded as food, I believe to be injurious.

Considering the fact that the interior of the intestinal tract is extensively inflamed, particularly in the early stage, and, if not attended with diarrhœa, is always greatly sensitive to the action of cathartics, the utmost care should be exercised lest anything of an irritating nature be got down the throat to aggravate.

My medical life began so near the time when the distinction between this fever and the typhus was drawn, leaving the latter as the inhabitant of the other side of the Atlantic and not here (though the fever here was so named), I cannot wonder that many physicians then did not readily get the new idea. Hence they continued to treat the typhoid as the typhus, though the bowel conditions of the two were so widely different. This mistake, or rather want of information, led to much rough and irritating drugging, and with very great harm as I had reason to believe. I saw so much of bad cases and deaths from lobelia, cayenne, bayberry, blood root, etc., that my mind sharply discountenanced this sort of medication and adhered to, what was to me, a more rational and soothing one.

Two years ago I saw an undoubted case of typhoid in a man of thirty-five. The physician in attendance, regarding the case to be a general run-down condition, plied the first stage with tonics and stimulants with the result of aggravating the whole course of the disease, which, in the last week, presented so much bowel trouble as to kill, whereupon he returned it as a case of dysentery, and death by it. I have in mind another case, treated by hot-drop remedies. I saw the case before the man died and noticed a condition of the lining of the mouth, I had never seen, nor have I seen the like since. The membrane was swollen up two or three times its proper thickness as though soaked, like a piece of tripe. What could produce this appearance other than the treatment, I know not. This case is mentioned rather as a matter of history, than because any modern doctor of intelligence would be guilty of giving such hot stuff; for neither this nor the former case were in the hands of ordinary medical intelligence.

In the last stage, that of ulceration, when the diffused inflammation has disappeared and the action is confined to a few patches and points where necrosis of tissue is going on, then a local stimulation, as that by turpentine, is the most useful remedy we have, and I most cordially invite every physician who has not read Dr. George B. Wood on the use of turpentine at this stage to be sure and read his Practice under this head. I have followed his advice over and over so many times I should hardly know what to do without the remedy, or some other thing closely allied to it.

Our younger physicians know nothing of the disastrous course of fevers. In olden times when it was against good practice to administer diluents, I came in on the border line and yet I saw enough to give me the most terrible ideas of the typhoid fever. Now, we understand that that group of symptoms—the typhoid—is not a necessary part of the fever at all, but results from the poisoning of the system by the nitrogenous compounds which the kidneys are set to carry off but which they cannot do unless supplied with plentiful diluents. Now it is to this point, more than to its nourishing quality, that I regard the free administration of milk to be the exact thing. Yet in recent years, articles have appeared in the journals advocating the nutritive relations of milk in this disease, one writer considering it necessary to give three or four quarts a day in order to sustain the patient with it. Thirty-eight years ago, I worked my way into the use of milk in the typhoid, giving it to support. Finding cases to be almost always mild in this course, as compared with the cases treated otherwise by those who did not dare to give milk, I came to the conclusion that the benefit of the milk treatment turned rather on the medicinal effects of the milk on the kidneys than on it as a nourishment. In a case where the patient objected to the milk, I accomplished about the same results, by thin mucilage of Irish moss, putting into it a little cranberry jelly to give it flavor. Of this she drank freely for many days

making a good recovery without the "typhoid symptoms."

Avoiding beef teas and liquors, and giving in the first stage, liquor ammonia with nitrate of potassa, and milk or moss mucilage as the diet, with occasional doses of calomel as required, and turpentine in its time, my cases have nearly all been mild, with little or no trouble from the so-called typhoid symptoms, which are the chief horror of this fever This course, with excess of fresh air and free and frequent sponging with tepid water, has almost always borne me in confident expectation of finding convalescence by the eighteenth, nineteenth or twentieth day, one case being decidedly on the recovery in fifteen days.

I have had two relapses after the patients began solid food. My preceptor had a similar case, as well as that of a man who relapsed the second time from solid food. This teaches us to make haste slowly till the diseased surface of the bowels has had time to heal.

I have known of perforations, but never had a case, unless it occurred in a girl of twelve, in whom an abscess formed near the top of the right ileum, which began far down. It discharged fœtid matter when opened. It began by a deep seated pain about the time when perforations take place, and at a point corresponding to the lower part of the small intestine where they principally occur.

I have had three or four cases of hemorrhage, but none proved fatal except one, where the bleeding went on two days without my being notified of it. On making my visit, I found that the hemorrhage had done its work, the woman being in a sinking condition. This case had been mild, progressing with no unusual symptom. I visited only every other day, instructing the mother to let me know if anything new came up. She did not notify me, and the hemorrhage began soon after my visit and went on till I saw her two days later. I cannot say what the outcome would have been had I been called. I should at least have had the satisfaction of trying. My feeling has always been that this life was thrown away.

I saw one case, that of a young woman of seventeen, whose flesh became so sensitive that we had to handle her on a sheet. An old doctor, who was widely celebrated in this disease, pronounced it complicated with general phlebitis, and would die, as he had always lost such cases. However, though then an undergraduate, I fought on and saw her restored, yet the many purple spots and particularly tender places eventuated in abscesses, so that I opened more than fifteen in the course of her convalescence. She contracted the fever of my preceptor, who was sick with it, being a servant in his house at the time. Her mother took the fever from her, and presented in the early stage both feet perfectly scarlet half way to the knees.

I saw a lad of sixteen, who was under the care of an eclectic. He went through every variety of complication—excessive epistaxis, hemorrhage from the bowels, stoppage of water, pneumonia, etc., and finally died of septicæmia, on the forty-third day of his sickness. I have not had such a case in my own practice, and have often wondered what would have been the course of this case had it at first received the treatment suggested above, or the more special germicidal treatment others are to-day so warmly recommending. Possibly results would have been the same.

65 Chandler Street.

THE TREATMENT OF TYPHOID FEVER.

By HERMAN D. MARCUS, M. D.,
[Resident Physician, Philadelphia Hospital.]

So much has been said about the treatment of typhoid fever, and so well has been every method defended, that it seems this subject should be well nigh exhausted, but the importance of this disease in this country gives nearly every practitioner a stimulus to make new researches and report fresh successes.

There is no disease which has found a wider range of treatment than enteric fever.

Since Eberth discovered the presence of a bacillus in the stools, the tendency seemed to be to find some drug, which, by its antiseptic properties, will destroy this bacillus. A great many writers have advocated the use of such drugs, which, by their laxative actions, will remove the

bacilli present, decreasing their numbers in the intestines, thereby diminishing their virulent powers.

If we could find a drug which would remove these germs entirely, freeing the bowels of their poisonous influence, even then would our work be only half done. True, the patient would be greatly benefited by such a drug, but our duty to the community at large would be only half done, knowing, as we do, the liability of infection through the stools.

Some years ago, Dr. Waugh advocated in THE TIMES AND REGISTER the use of sulpho-carbolates in the treatment of typhoid fever, and, as time progresses, we find daily more cause to adopt his suggestion.

Sulpho-carbolate of zinc, which undoubtedly ranks foremost in the group, is a true intestinal antiseptic. There are other drugs whose action is the same, but none act surer, quicker and more thoroughly than the sulpho-carbolate of zinc.

When this drug is administered properly and in time, it will achieve wonderful results, and I believe that the death rate, when employing this salt, is less than one per cent., a percentage which is far below that of other methods.

The mode of administration is as follows: At the outset, five grains should be given, repeated in three hours, and when the fever abates and the stools are diminished in number, two to three grains every three hours. The drug must be kept up until the peculiar typhoid diarrhœa has entirely ceased, and with it, the fever.

Under such treatment the temperature will never be abnormally high, and the stools will lose their offensive odor and be lessened to two or three a day. No nervous symptoms or intestinal complications will arise, and the patient will at no time fall into this so-dreaded "typhoid" state.

Combined with this treatment the sanitary and dietary precautions peculiar to typhoid fever must be carefully observed. The stools must be thoroughly disinfected before removing from the room. The bed clothes and garments worn by the patient should be washed in an antiseptic solution (bi-chloride of mercury 1-500 or 1-1000), and the sick room well aired. The nurse must, at all times, observe strict cleanliness, in fact, should use antiseptics whenever handling the patient, before and after.

The diet should consist of milk solely, and this should be well boiled and peptonized. The amount of milk that may be given daily varies greatly, and it is wisest to give small amounts repeatedly. No water should be given to drink, and if the patient is very thirsty, ice may be given to suck. Champagne will be found a very refreshing as well as stimulating drink.

Stimulants should not be employed too early and *over* stimulation must be carefully avoided.

If such treatment is carefully followed out we will have the very best results and hardly any failures.

In conclusion I wish to quote the cases which came under observation:

Mrs. M., aged 42 years, treated for eleven days with calomel, salol and sponge baths. On the eleventh day her husband called me in. I found the lady very much debilitated, temperature $103\frac{2}{5}$, reported ten to twelve very offensive stools. Tongue was thickly coated with a black deposit, sordes on lips and teeth. Prescribed five grains sulpho-carbolate of zinc every three hours. On the third day the stools numbered four or five, the temperature had fallen to $99\frac{3}{5}°$, the tongue had lost its black coating and the patient was brighter and as she expressed it, "felt well enough to get up." About sixteen days later the patient had entirely recovered.

R. F., age 24 years, was under treatment for about two weeks, when I was called in. His history was that up to four days previously he felt perfectly well, when his stools increased in number to twenty to twenty-four daily and temperature of $104\frac{2}{5}°$ at six P. M., when I first saw him. I ordered sponge bath, thereby reducing the temperature to 102° and ordered five grains of sulpho-carbolate of zinc every two hours. Five days later patient was greatly improved. Temperature had gradually receded until on the fifth day it was 99°; only two to three stools were passed daily. Patient improved rapidly and left the bed on the twenty-ninth day from the outset of the disease. No relapse or sequelæ.

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A Weekly Journal for Medicine and Surgery.

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TYPHOID FEVER.

JUST now St. Louis shares with Chicago an unenviable prominence as the home of typhoid fever. The Medical Fortnightly says that during November, 1918 cases were reported. Most of these cases occurred in the parts of the city supplied with city water; only 71 cases out of 1417 coming from the well and cistern section. Of 2086 houses examined, in 1417 the plumbing and sewerage were in good order. The cause of the epidemic appears to be, as Dr. Lewis claims, the city water. Three large sewers empty into the river above the water-works; and the "filthy contents of these sewers may be seen almost as separate streams following the current towards the intake."

The *Review* says the city chemist has analyzed the city water and pronounced it as pure as Mrs. Cæsar. Ohmann-Dumesnil does not express a decided opinion, but seems inclined to lay the blame on the comet. It must go hard with a St. Louis man to acknowledge that any harm can come from Mississippi water; when from time immemorial every inhabitant of the city has sworn by the muddy mixture, claimed that no germs could live in it, and that the mud was nutritious. At our last visit to that charming city, we let a glass of water stand over night. In the morning there was a heavy, ropy sediment occupying one-third of the glass, and the supernatant liquid was still opaque. We mentioned this to several influential citizens, but got no sympathy; and we must acknowledge that, mud and all, it was remarkably pleasant to the taste. But the bacillus of Eberth will flourish even in the soil of Missouri, when fertilized by the sewage of a great city.

* * *

In the *American Journal of Pharmacy*, Mr. George M. Beringer discusses the value of Ehrlich's test for typhoid fever. A small quantity of a one per cent. solution of sodium nitrite is added to the urine and then a quantity of a saturated solution of sulphanilic acid in a five per cent. solution of hydrochloric acid, followed by the addition of ammonia. The test is stated to produce an orange-red color.

Dr. C. E. Simon, of the Johns Hopkins hospital, recommends the contact method and the following modification of the test: "Solution 1, a saturated solution of sulphanilic acid in 5 per cent. hydrochloric acid; solution 2, a 5 per cent. solution of sodium nitrate; 40 cc. of solution 1 is mixed with 1 cc. of solution 2, and an equal amount of urine is added and mixed. 1 cc. of ammonia is now carefully run down the side of the test tube; at the junction of the two liquids there will be observed a ring of the characteristic color varying from an eosine rose to a deep garnet red. The color is due to the change of the amido-benzene-

sulphonic acid to diazo-benzine-sulphonic acid, by nitrites or nitrous acid in presence of an alkali.

Mr. Beringer states that he obtained the typical reaction with urine from remittent fever, and even from non-febrile cases. Many substances were also tested, and among them several gave the reaction supposed to be characteristic of typhoid urine. Albumen gives an orange to red line; peptone a pale red; phenol and creosote a dark red, identical with that of typhoid urine. The sulpho-carbolates gave a pale eosine red; beta-naphthol, a magenta; resorcin, a dark red-brown; thymol and eugenol, a red; gallic acid and pyrogallol, a dark red, etc., etc. From this he concludes that while the absence of the reaction may indicate the absence of typhoid, the presence of the reaction would not warrant the diagnosis if unsupported.

* * *

Dr. Northrup, in a paper read before the American Pediatric Society, claims that typhoid fever in a child under two years of age has never been observed in the New York Foundling Asylum, and that swelling of Peyer's and the mesenteric glands with enlarged spleen, at that age, have not the same significance as in adults. He bases his views upon the absence of the typhoid bacillus.

Earle, however, (*Arch. Pediatrics*) claims to have had a case in a child six months old. The diagnosis was made from the autopsy, at which Peyer's patches were found to be ulcerated and the mesenteric glands swollen. But—and this confirms Northrup—no bacilli could be found in either ulcers or spleen.

Eberth obtained typhoid bacilli from a twenty-weeks' fœtus, expelled by a woman during an attack of typhoid.

In the discussion of these papers, Drs. Seibert and Winters said they had never diagnosed typhoid in children under two years of age, while Blackader thought they occurred, though rarely.

Dr. Christopher pointed out a means of detecting the rose spots. He places a finger on either side and stretches them until the spot disappears.

Dr. Seibert said he treated all typhoid cases by irrigation, of the colon, after Mosler's example, but with pure water.

* * *

The only infallible test of typhoid fever is then the detection of the bacillus; as we cannot put faith in Ehrlich's test, or even in the evidence of an autopsy.

A good deal of valuable material prepared for this week has been crowded out, and will be published next week. The great special number, devoted to the treatment of consumption of the lungs, will appear on January 6th. We will endeavor in future to alternate our special issues with general ones, in order to accommodate the increased amount of material being sent to us. Those who receive sample copies of this issue can obtain the next, or the phthisis special, by sending ten cents. But the better way is to send $3 00, and get the journal for a year, with all the specials.

In a paper read before the Section of Physiology and Dietetics, American Medical Association, Dr. J. Mount Bleyer says:

"I have substituted kumyss, made from Kumysgen (the new dry form of kumyss) in all cases where I formerly employed liquid kumyss, and find it much superior in many respects, both in regard to convenience of handling and in the results obtained. It is uniform in composition and I find most patients will take it readily, which is not the case with the liquid kumyss."

This enables the physician to prepare, at a moment's notice, a very pleasant and nutritious form of kumyss. The value of this improvement is manifest.

Treatment of Typhoid Fever in the Philadelphia Hospitals.

ST. AGNES HOSPITAL.

IN answer to your questions concerning the cases of typhoid fever treated here, I send the following replies. Hope they will give some idea of what you desire.

During the months of August, September, and October of the present year, ten cases of typhoid fever were treated in this institution.

DIET.—The diet consisted of fresh milk given at intervals of two or three hours; pre-digested where stools showed indication of mal-assimilation. Beef tea was sometimes used in cases where patients showed great repugnance to milk.

GENERAL TREATMENT.—Temperature was controlled by the cold bath, cold pack or sponging, depending upon the number of baths necessary, strength of patient and evidence of hemorrhage; the cold bath being used wherever not contra-indicated.

The typhoid condition, dry coated tongue, etc., was met by turpentine.

Tympanites by cold cloths, Hoffman's anodyne and occasionally the rectal tube.

FEVER.—Temperature was taken every few hours and patient placed in tub at 103° F. Usually bath was given before any definite idea of the range of temperature could be gotten. Fever continued about the usual number of days and in only one case, that of relapse, was it prolonged.

DIARRHŒA.—Only one or two cases showed any diarrhœa, constipation being rather marked in the remainder.

HEMORRHAGE.—Two cases showed hemorrhage. One in the third week, which terminated fatally. The other about the end of the second week had seven or eight severe hemorrhages, followed by perforation, peritonitis and death.

DELIRIUM.—In one case, that of perforation, the delirium came on after the peritonitis set in.

One other was delirious at the time of and two days preceding admission. The delirium disappeared after the first bath and never returned.

LUNG COMPLICATIONS.—No cases of pulmonary involvement beyond the customary slight bronchitis.

HEART FAILURE.—No case of death from such cause, although all were stimulated when heart showed signs of weakness.

USE OF STIMULANTS.—Whisky was the stimulant relied on in all cases of typhoid, given in quantities varying from two or three to twelve or fourteen ounces in the twenty-four hours. Strychnine was occasionally used in doses of $\frac{1}{20}$ of a grain.

DISINFECTION OF STOOLS.—All stools from typhoid cases were at once disinfected with lime or carbolic acid.

RESULTS.—Of the ten cases two died. Both fatal cases had hemorrhages and one perforation.

The cases this year of typhoid are much below the usual number.

D. D. SAUNDERS, JR., M. D.,
Resident Physician.

GERMAN HOSPITAL.

IN compliance with your request to furnish data in regard to typhoid fever as seen and treated in the German Hospital, I would take pleasure in stating the following: Prior to 1889, all typhoid fever patients were treated in the "old fashion," with little or no intestinal antisepsis, and chemical antipyretics for the fever. In 1889, Prof. L. Wolff treated all enteric fever patients with chemical antipyretics, but used naphthalin in all cases as an intestinal antiseptic. Under this treatment the mortality was 10 per cent. while under the other plan the mortality ranged as follows:—1884, 23.4 per cent; 1885, 11.4 per cent; 1886, 20.4 per cent; 1887, 17.4 per cent; and 1888, 13.2 per cent. In 1890 the cold bath treatment of Brand was instituted, the result being for the year, six deaths in 134 cases treated. In 1891, 131 cases were treated and nine deaths resulted. Up to the present time sixty-seven cases have been treated in 1892, with but five deaths. One of these deaths was due to pneumonia developed after all symptoms of typhoid fever had subsided and another died of peritonitis, which attacked the patient after having been convalescent for about two weeks. The post-mortem examination revealed only healed ulcers and the peritonitis could not be accounted for.

At present all cases are put on milk diet, no solid food being given until the temperature has been down to normal for at least eight days, and even then but light diet is given, the food being increased in amount gradually. The general treatment is calomel, hydro-naphthol (intestinal antiseptic), HCl, whisky in asthenic cases, and baths at temperature 103°. Baths 85°. Diarrhoea not checked except by the hydro-naphthol. Hemorrhage treated by ice applied to the abdomen, ice water injections, and turpentine internally. Delirium treated with bromides, and straps used if necessary. Few, if any lung complications found. Heart failure noticed in two cases one of which died. Stimulants are used only when needed, they being whisky, digitalis and strychnine. Trusting this will fulfil all you desire, I am,

A. D. WHITING, M. D.,
Med. Res.

ST. MARY'S HOSPITAL.

OUT of seven cases of typhoid fever, the general method of treatment was expectant symptomatic. Brand method of treatment was carried out in three cases, and one relapse, coming in in the relapse. No mortality. Temperature of each of these reached 105°. Diet, milk in all the above. Diarrhœa checked by a pill of:

℞—Opium.
Acid Carbol.
Pulv. Iodin.
Quin. Sulph.

But none was over three stools during one day, so were left alone.

Delirium by cold bath, opium and stimulants. No heart failure. No lung complications. Stimulants were given moderately from start, and increased as was deemed necessary. Disinfection of stools by bichloride and chloride of lime.

One case by hydro-naphthol gr. ij. every three hours. Constipation was obstinate, and was given gr. iv. of calomel night and morning, and enemas of creatin and glycerin. Temperatnre ran to 104°.

Diet—milk and aq. calc., beef tea, broths, boiled water, and ice to cool same. No stimulants. There was no delirium, hemorrhage or lung complications.

One case, girl aged ten years—Brand treatment was started, but was abandoned from depressing symptoms, and antifebrin gr. ij. every three hours was given instead. Temperature ran from 103 to 105° under Brand treatment, and 99 to 101° under antifebrin. No hemorrhage. No constipation till late, when it was very characteristic.

Stimulants, brandy ℥j every two hours.

Diet—milk.

One case—woman, single, aged twenty-three—stated that she had been feeling unwell for only three or four days, but this disproved by the other statements. Was admitted with temperature of 103°, and was given bath every time temperature went over 102.5°, being watched by attendant in ward. On the second day showed moderate delirium, with temperature of 103°; third and fourth days, same. On evening of fourth day delirium became furious, temperature went from 103 to 105°: was reduced, but persisted in rising. Was given opium every two hours, and ice to head and neck. Pulse rapidly became weak, fluttering, going 104 to 120, 140, 160, 170, when death soon terminated, from exhaustion.

Diet—milk and beef tea, broth, etc.

Diarrhœa only moderate. Stimulants were given from start. Stools were disinfected by bichloride of mercury.

O. D. SCHAUL, M. D.

PRESBYTERIAN HOSPITAL.

SINCE September 1st, 1892, there have been fifty-nine cases of typhoid fever, of whom twelve are still under treatment. The mortality was three. The sex of the patients about equal numbers. I used hydrotherapy in all the cases with most gratifying results. The other treatment was wholly symptomatic.

Among the rarities was a typical case in a child of four months, and another in a woman of seventy years. As complications I had two cases of periostitis of the pelvis. Dysenteric symptoms appeared in six cases; constipation was the rule, but a few presented most persistent cases of diarrhœa. Seven cases were in children under twelve years. In some instances families were represented by at least two members. The habitats of the large major-

ity of our patients are the adjacent localities, poorly drained or not drained at all.

WALTER R. WEISER, M. D.,
Resident Physician.

UNIVERSITY HOSPITAL.

THE treatment of typhoid fever at the University Hospital is as follows:

1. Milk diet.

2. Absolute rest in bed; enforced use of bed pan and urinal. Disinfection of stools with chloride of lime.

3. Tub bath whenever temperature reaches 102°$\frac{1}{5}$.

Rules for bathing:—*a*. When temperature of patient is below 101° temperature observation to be made every three hours; when above 101°, every hour, when 102° every half hour.

b. Temperature of bath 70°.

Tub is wheeled aside of the bed and patient lifted in by two nurses, one holding the patient under the arms, the other by the legs.

c. Systematic rubbing is kept up during the bath, and afterwards if the patient shivers much.

d. Water (temp. 50°) is poured over head and shoulders at the beginning of the bath.

e. If desirable a hot drink such as hot milk, milk punch may be given the patient during the bath. If temperature is difficult to reduce a glass of ice water may be given instead.

f. Patient remains in bath from fifteen to eighteen minutes.

If temperature tends to remain high, cold cloths or an ice cap is applied to the head.

Above is the detail of the bath treatment used here. No medicines are given constantly. The vast majority of cases require whisky in greater or less quantities.

Indications are treated as they arise. Our rule is to keep patient in bed and upon milk diet, for one week after the temperature reaches normal.

In regard to the prevalence of typhoid fever since September 1st, and the locality of the residences of the patients, I would state that we have had ten cases of it in the University Hospital since the above mentioned date and that six of these have resided in West Philadelphia within a radius of one mile of the hospital.

Two patients lived in the neighborhood of Twentieth and Walnut streets, the other three coming from other cities.

The cases have been for the most part uncomplicated, and our death rate has been *nil*.

In one case a relapse occurred on the thirty-first day, after an apyretic period of seven days. This occurred despite the fact that the patient occupied still the dorsal decubitus, and was still on a milk diet.

The treatment pursued at this hospital is the Brand treatment. Whenever the temperature of the patient reaches 102$\frac{1}{5}$° he is plunged into a tub of water (temperature of 70°) and allowed to remain for fifteen minutes. The effect of the baths on the temperatures of different patients varies. Some drop immediately to normal or thereabouts, while others require a repetition of the baths to keep the temperature below 102$\frac{1}{5}$°. In none of the bath cases was there observed any delirium whatsoever.

JAY F. SCHAMBERG, M. D.,
Resident Physician.

CHILDREN'S HOSPITAL.

1. Diet—milk and limewater.

2. General treatment — symptomatic, quinine suppository gr. ii, bis die, whiskey p. r. n.

3. Fever treatment — cool sponging when temperature is 103° or over.

4. Diarrhœa treatment — injection of starch-water and laudanum p. r. n.

5. No hemorrhage.

6. Delirium not excessive.

7. No lung complications.

8. No heart failure.

9. Stimulants as necessary.

10. Chloride of lime.

11. Recovery.

ALFRED HAND, JR., M. D.,
Resident Physician Children's Hospital.

WOMAN'S HOSPITAL OF PHILADELPHIA.

THROUGH the kindness of Dr. Frederick P. Henry, Professor of the Principles and Practice of Medicine in the Woman's Medical College of Pennsylvania, I am provided with a brief resumè of the methods advocated by himself in the treatment of typhoid fever,

and given in detail in Hare's Therapeutics, Vol. II., this being the plan of management recently followed by us, both in the wards and out-practice of the Woman's Hospital.

Cases of fever being excluded from our wards, and only treated when occurring inadvertently in the hospital, our experience as to numbers does not equal that of many institutions. With reference to the cases treated, however, I should like to add our testimony to the efficacy of the methods approved by Dr. Henry. In addition to the cold sponging to which he refers in his resumè, I should like to call attention to our employment of a metallic reservoir for ice, the invention of Mr. Edwin Magill, of South Bend, Washington, which we used with very gratifying results in cases of excessive high temperature and marked head-symptoms.

This device, which surrounds the head at a distance of a few inches from it, if kept continually filled with ice, and produces thus a layer of cool air about the head, which has a striking effect in reducing the temperature and quieting delirium. In two desperate cases recently treated by us, in whom the temperature reached 107° Fahr. on several occasions, the application of this apparatus produced in a short time a marked fall, and was less depressing in its results than the cold plunge bath treatment.

The tendency to hemorrhage was controlled by the use of ice upon the abdomen and hypodermatic injections of ergotine. In threatened heart-failure, hypodermatic injections of strychina, digitalis, or caffeine were employed as indicated, and alcoholic stimulants were administered by mouth. The ordinary treatment of an uncomplicated case is thus given by Dr. Henry :—"The treatment of typhoid fever pursued at this Hospital is largely symptomatic. The temperature is kept within moderate bounds by cold sponging, repeated as often as may be necessary to accomplish this purpose.

The diet is composed chiefly of milk, of which, however, there is rarely given more than three pints in the twenty-four hours. Water is freely administered. Beef-juice or some reliable preparation of beef-peptones is also given when diarrhœa is absent or moderate. Gelatine and peptonized milk-jelly are used chiefly as "relishes" toward the close of the febrile period.

Medicinally the main reliance is on intestinal antisepsis, which experience has shown to be best accomplished by the use of thymol in pill or capsule, from twenty to forty grains of this drug being given during the course of twenty-four hours.

Stimulants are not given as a matter of routine, but only to meet the well-known indications for their employment.

ANNA M. FULLERTON,
Physician in charge.

Letters to the Editor.

TYPHOID FEVER.

SINCE I reported to you my opinion of sulpho-carb. zinc, I have tested it in eighteen more cases typhoid fever. I am still stronger in my opinion of its value in cutting short the disease. I believe, too, it is valuable in hemorrhage of the bowels. I just treated a young lady who had fourteen severe hemorrhages, and I gave her eighty grains sulpho-carb. in twenty hours, with only the addition of sub-nit. bismuth—she recovered. I at this writing have four cases in one family—use the zinc and there is not a particle unpleasant odor after a move of the bowels. When temperature is above 102° I gave acetanilide two to three grains with one of sulph. quinine every three to four hours. I think you have made the greatest discovery of the age in the zinc treatment.

W. S. CLINE, M. D.

WOODSTOCK, VA.

I have perused your report on the treatment of typhoid fever with the sulpho-carbolates, read before the Pennsylvania State Medical Society, in 1887.

I have been using the sulpho-carbolate of zinc in the treatment of typhoid fever since I read your article with the most gratifying results. I have used it in every case treated, and have used but little else. Every case made a good recovery, and I have not had a hemorrhage. I put my patients on the zinc in

the beginning, and keep them on it throughout. I believe I have aborted several cases. I would like to know what your experience has been since you reported your cases in '91. I have advised a number of physicians to use your plan of treatment, and they report most excellent results.

J. D. COLE,

NEWBERN, TENN.

[I have continued the use sulpho-carbolate since 1891, in every case of typhoid fever treated by me, and have not had a death. Many of my old students have reported to me similar unvarying success.—W. F. WAUGH.]

The Medical Digest.

GERMAN NOTES.

TRANSLATED BY HERMAN D. MARCUS, M.D.

[Resident Physician Philadelphia Hospital.]

TYPHOID FEVER.

DR. W. E. TRESSIDER recommends following treatment, which he has found of great value in the Nottingham hospital:

The diet consisted of milk, given in quantities of one-half pint during the fever—solid food was only permitted six days after normal temperature was established. If the temperature rose over 39° C. during the day or 40° C. during the night, sponge baths were given every four hours.

Intestinal hemorrhages are quickly controlled by opium, which may be given even in the presence of perforation or peritonitis; hypnotics were prescribed to counteract insomnia and delirium.

Naphthol was found useless, in fact it caused at times vomiting and cardiac depression.

Oakum is preferable to lint, sponges, flannel or muslin as a cleansing material. All bed clothes and garments must be put in an antiseptic fluid. The nurse must cleanse her hands antiseptically before and after giving food—*Brit. Med. Journal.—Deutsche Mediz. Zeitung*).

F. W. Anderson has been using *perchlorate of iron* for a number of years in the treatment of typhoid fever and has had no death to record, if such treatment was employed before fatal complications, such as perforation, occurred.

The treatment consists in the administration of five drops of the liquor ferri sesquichlorati every hour day and night until the temperature remained normal for eight days. The iron is combined with thirty drops of glycerine or ʒi of simple syrup, a few drops of tincture of cinnamon or water, so as to make the dose palatable. If the mouth or throat becomes dry it is advisable to give about 4-5 grains of bismuth about ten minutes before administration of the iron.

With this treatment the diarrhœa subsides in a few days, and then he recommends a mild aperient daily until the iron is discontinued. The temperature becomes rapidly normal and no dangerous complications arise.—*British Med. Journal.—Deutsche Medizinal Zeitung.*

Paul Werner recommends chloroform in the treatment of typhoid fever. He has treated, since November, 1890, to August, 1892, 126 patients with this drug, and uses it as follows:

One to two teaspoonfuls of a one per cent. solution of chloroform are given every hour or two (day and night). This dose is gradually decreased according to the remission of the symptoms, until, finally, only a few spoonfuls are given in twenty-four hours.

Under such treatment he has never lost a patient. The tongue and oval cavity did not show the black, foul-smelling coating; thirst, which generally becomes unbearable, disappeared in a day or two. The most severe diarrhœa subsided gradually; tympanites was quickly relieved, if already present.

No nervous symptoms developed during such treatment, and if such were already present, they were quickly relieved, most generally in a day or two.

Patients treated with chloroform had no relapse and no sequelæ were observed.

Werner thinks that the action of chloroform is symptomatic; he believes that it prevents the formation of the specific decomposing products in the intestines.

He prescribes this drug, if the patient has not passed the tenth day of the disease.—*St. Petersburger Med. Wochenschrift.*

News.

THE ONLY KNOWN STERILIZING APPARATUS.

THE recent visitation of cholera has done more in six months to familiarize people with the theory of disease germs than what was probably learned before in six years. That this disease is likely to appear again in the Spring is generally admitted, and it behooves one and all to take those precautions proven to be preventive. Drinking water and milk are the principal mediums of conveying into the system the germs of cholera, typhoid fever, consumption, measles, scarlet fever, erysipelas, and other kindred infectious diseases. Bacteriologists are agreed that filters do not destroy disease germs, but rather serve as a breeding place. Water sterilized by chemicals is not more reliable, and water sterilized by boiling in a vessel not steam tight, cannot always be relied upon, as the heat cannot be raised above 212 degrees. The effective sterilizer, therefore, must be one which subjects the water or milk to a heat of from 212 to 260 degrees Fahrenheit, and yet retains all the salts to which it owes its tonic properties, and all the free gases which render it refreshing and pleasant to the taste. To be fully practicable, the system must be of simple construction, wholly automatic, and easily applied in any household. Such an apparatus is the one made by the Dr. West Sterilizer Manufacturing Company of this city. This apparatus is composed of a self-cleaning filter, a thermal valve with circulator attached, and a self-cooling air-tight tank for storage of the sterilized water or milk, with connecting pipes attached, to the ordinary system for heating water for household purposes. The filter is of unique design and self-cleaning. It not only separates the impurities held in suspension by the water, but discharges these through an independent outlet. Its method of working is as follows: The circulator attached to the thermal valve is composed of outside and central chambers. The outside chamber receives and discharges the hot water from the water-back of the stove or range utilizing it for heat, while the inside or central chamber receives and retains the filtered water for sterilization. The thermal valve, through which the central chamber discharges, is operated by mercury, which expands or contracts according to the rise and fall of the temperature of the water in the central chamber. When the temperature is raised to 212° the expansion of the mercury opens the valve and the sterilized water is discharged through pipes into the storage tank. As soon as the temperature of the water in the central chamber falls below 212° the mercury contracts and closes the valve. This valve is made adjustable and can be set to open or close at any desired degree of heat; preferably for sterilizing water at 212 degrees and for milk at 230 degrees. The storage tank is air-tight and arranged so as to cool the sterilized water to the temperature of hydrant water. From this tank it is conveyed through pipes to any part of the dwelling desired; as for instance the ice chest of the refrigerator, coiling the pipe therein, placing ice on the coil, and furnishing ice water without contaminating with disease germs that may be present in the ice. Water and milk thus sterilized and stored up under pressure in air tight tank will keep from decomposition for an indefinite length of time. The whole system being automatic in its operation does not need the attention of servants, nor can it be tampered with in any of its parts, while it can be readily attached at a nominal cost to the ordinary domestic house boiler or to any steam boiler or pipe. Without question this is the simplest and most effective apparatus of the kind upon the market, and bears the strongest kind of an indorsement from Henry Leffman, W. Joseph Hearne, Surgeon Jefferson Medical College, and many others. When the Philadelphia Board of Health recently fitted up the Georgeanna as a quarantine steamer, they adopted this sterilizing system, of which the physicians and officers speak in the highest terms. The works of the company are located at Bound Brook, N. J., and the officers are Andrew Lane, President; Dr. S. L. West, Vice-President; L. Alvin Zohe, Secretary; and Elie Erismann, Treasurer. The Philadelphia office is located at 633 Arch street.—*Journal of Commerce.*

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The Times and Register.

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PAGE

ORIGINAL ARTICLES:

THE SUSPENSORY BANDAGE. By W. Thornton Parker, M. D., M. M. H. 695
THE GENERAL PRACTIONER AS A GYNECOLOGIST. By R. M Cunningham 697
LOSOPHAN. By Dr. Edmund Saalfield 701
TYPHOID FEVER. By J. W. King, M. D. 705
TYMPANITES OF TYPHOID FEVER. By R. M. Harbin, M. D. 706
TYPHOID FEVER. By Wm. Patch, M. D. 707

EDITORIAL:

CARDIAC TONICS 708

LETTERS TO THE EDITOR:

The Treatment of Typhoid Fever.. *E. T. W. Hall, M. D.* 710
Blood Poisoning. *Louis Lewis, M. D.* 711

PAGE

The Value of Electro-Diagnosis in Some Cases of Spinal Paralysis with Results of Treatment. *Truman Coates, M. D.* 712
Cocaine Anæsthesis. *Emery H. Leyman, M. D.* 713
Lupus Vulgaris. *Truman Coates, M. D.* 713
A Neurological Number Wanted. *Truman Coates, M. D.* 714
Cystitic with Complications. *J. M. R.* 714
Maternal Impressions. *A. N. Spurgeon, M. D.* 714
For Whooping Cough. *R. S. Patterson, M. D* 715

BOOK NOTICES 715, 716

THE MEDICAL DIGEST:

The Hydrotherapy in Typhoid Fever 716

NEWS:

Therapeusis of Piperazin 717

NOTES AND ITEMS ..... iv, x

Original Articles.

THE SUSPENSORY BANDAGE.

By W. THORNTON PARKER, M.D., M.M.H.

BEVERLY, MASS.

VARICOCELE is most frequently the condition which calls for the use of the suspensory bandage. We find that a very large number of patients suffering from what Sir A. Cooper and Sir James Paget would not recognize as *disease*, have imagined that this condition has resulted from excessive sexual excitement; and, shrinking from bringing the matter to the notice of the family physician, have been induced to consult some vulture of a quack, and have paid dearly for their modesty or for their unreasonable shame. A prominent clergyman of my acquaintance was a victim of one of these unprincipled practitioners. He noticed the steady increase of the ruinous mass, and, dreading to go to his family physician, fell into the hands of one of the "medical institute humbugs;" who took from him several hundred dollars, until at last in despair he consulted a medical friend, who saved him from further mental and bodily suffering and from the drain on his limited funds.

Dr. Gross refers to Dr. Brinton as the demonstrator of the fact that the left spermatic vein at its entrance into the emulgent is unprovided with a valve. The left vein is naturally considerably longer than the right and its direction also is more at a right angle with the current of the blood. It will therefore be more readily understood why any pressure which may tend to diminish the normal circulation, will rapidly induce varicocele. Pelvic congestion, most commonly arising from constipation or neglect of the regular evacuation of the rectum will be a common cause for this condition. Fatiguing exercise, walking, jumping and rowing, protracted standing, dancing, frequent warm bathing and venereal excess are causes well known to the medical profession. Cavalry service is especially liable to provoke the disorder or the injury, if we may not actually say *disease*.

Disease is defined to be: "Any departure from the state of health;" and surely varicocele may justly be placed in this category. In my experence while serving in the medical department of the United States army I have found varicocele very prevalent among cavalrymen and especially among those who have spent a long time in the saddle. A summer campaign which keeps the command in the saddle for weeks and even months, is a very decided cause of severe varicocele. At least this has been my experience.

The treatment is usually palliative; operative interference is not popular either with the profession or with laymen. Cold bathing, especially of salt water, is to be recommended. Daily

morning sponge bath, especial bathing of the parts, in cold water, every morning. Systematic use of mild aperients. Avoidance of straining at stool. Careful attention to daily movements of the bowels. Abstinence from sexual excitement. Warm bathing should be indulged in not oftener than once a week. Sexual excitement is undoubtedly a common incentive for varicocele, but is by no means so common as an originator, as many people seem inclined to infer.

The mechanical treatment by use of a well fitting suspensory bandage is of the greatest importance, and most likely either to result in a cure, or to greatly lessen the severity of the conditions obtaining. Unfortunately few physicians seem to exert any interest in the cure of this disease; and beyond prescribing an aperient, a tonic, and a bandage, little is attempted. This condition is so universal, and careless treatment of it so notoriously common, that we feel justified in saying a word as to its mitigation by palliative treatment. I have been repeatedly called upon to provide suitable bandages for this class of patients, but have found it very difficult to purchase appropriate bandages. Those for sale in the drug-store, are apt to be ill-fitting, unserviceable and usually expensive. An ill-fitting bandage will undoubtedly aggravate the disease and cannot offer any encouragement for mitigation or cure. When a patient has been used to a well fitting bandage, and is dependent upon it, if for any reason a new bandage does not offer proper support, he suffers discomfort and very frequently pain. Sometimes this discomfort amounts to a sense of weakness, even to syncope; and an ill-fitting bandage either giving the impression of slipping or actually coming off when most needed, will make some patients exceedingly nervous and irritable. The common bandage has too many strings and too much elastic material, rubber stays, etc. Commonly these misnamed *supports*, are made of silk; and the wearers either do not know of the need of cleanliness, or cannot afford to have more than one at a time; wearing the bandage until common decency demands its destruction, or until the weak and flimsy materials have gone to pieces, before giving any reasonable return for the investment. The ill-fitting bandage has often forced patients to abandon all hope of relief, excepting in radical operations, often dangerous, expensive and even attended with fatal results. In one case at least, recorded I believe in Ashhurst's Encyclopedia of Surgery, the patient insisted upon castration to relieve him of the incessant, maddening pain of aggravated varicocele. I have had cavalrymen of good courage beg for relief from duty, and admittance into hospital, that they might escape the gnawing pain of varicocele. If varicocele be caused in some patients by excessive venery, I believe that the constant irritation and the presence of so much circulatory fluid about the testicles and generative organs generally induces, oftentimes unreasonable and abnormal, sexual appetite. Patients are often harassed and troubled by a sense of distress in and about the veins, "as if a little more exertion would cause the veins to burst," with possibly fatal results, before medical aid could be summoned. I think I have shown, in these statements, how serious an affection is varicocele, and how important it is that a serviceable suspensory bandage should be provided, if one is to be provided at all. I believe that this is the best treatment, always considering the question of hygiene, moral and physical. The sanitary suspensory bandage should be constructed of firm material, easily adjusted, readily removed, quickly cleansed, and of accurate and rational fit, so that the testicles may receive even support, with moderate normal pressure. Such a bandage should not be worn longer than a week at a time without thorough washing and disinfection, and it should have been accurately and carefully fitted. Strong linen or cotton for the belt or girdle, with a buckle, resting upon a good cushion to prevent friction and irritation, and the bag itself made by carefully knitted cotton, firm and strong, to retain its shape without alteration—these are the essentials—made upon anatomical and antiseptic principles. Such a bandage, if properly fitted, will relieve annoyance and pain and weakness, and produce a sense of comfort, security and strength. Girded up with such a bandage, a man can take fresh courage, and emerge from what has hitherto been to him depression, both

mental and physical. I have devised such a bandage, and find that its use has been appreciated, and that it has proved by some years of use that it is substantial and competent to mitigate the disease, and to afford comfort and reasonable support. Those which I use in my practice are made on these principles, and I have ceased to consider varicocele such a painful and distressing disease, provided the hygienic instructions are carried out, and a rational sanatory suspensory bandage is properly adjusted.

BEVERLY, MASS., NOV. 25, 1892.

THE GENERAL PRACTITIONER AS A GYNECOLOGIST.

BY R. M. CUNNINGHAM,

BIRMINGHAM, ALA.

TO know one's duty and to possess the capacity to execute it, is an axiom applying to every relation of life, but more particularly to the medical man, because he deals with human health and life. That the science of medicine, using the term in its comprehensive sense, thoroughly understood and properly applied in practice, always does good, and often saves life, cannot be questioned. That an imperfect knowledge of this science, or its improper application in practice, may result disastrously, also cannot be questioned. Therefore, to comprehend thoroughly the principles of medical science, and to skillfully apply them, is the moral, conscientious, and should be, legal requirement of every practitioner of medicine and surgery. The subject as a whole, however, is so vast, both in its scientific and practical relations with the diseased, embracing every organ, tissue and system of the body, with their multifarious forms of disease, differing in etiology, pathology, symptomatology and treatment, that the mind of man cannot comprehend the whole problem, and apply in practice the best and surest treatment; consequently specialisms necessarily follow. Hence if humanity enjoys the full benefits at the hands of the profession which the capabilities of the science and art confer, the appellation of "General Practitioner," in its most comprehensive sense, exists only in theory and not in fact. Yet there is such a thing as a general practitioner, and who, in the restricted sense of doing the best he can, is found everywhere. Specialists, who deserve the name, are not found everywhere, and to the majority of the people in many places are not accessible; therefore upon the general practitioner such people must alone rely for the benefits of the medical profession, or suffer and die without them. Such an environment embraces a large percentage, if not a majority, of the people of this country. The general practitioner thereby becomes the most important and useful member of the profession. Indeed he is one of the rank and file of the vast army of medical men, who are officered and directed by the specialists in the various departments of the profession.

In our large cities and towns the general practitioner's duties become very much restricted. Within a few blocks he may send his patients to the oculist, aurist, neurologist, gynecologist, etc.; his surgical cases to the general surgeon; charity cases to the public hospital; but in the country and smaller towns there is no such favorable environment. The most of his clientel are financially unable to visit the larger cities to consult a specialist; there is no public hospital for his cases of charity. Therefore he must do all that can be done under the circumstances.

Of all specialisms, gynecology stands at the head. No department of the profession has accomplished more. No specialist stands higher, nor is more revered than the gynic specialist. No country has done more in pioneer gynecology than America. No country, in any department of the profession, can show brighter and more illustrious names than McDowell, Sims, Battey, Emmett and others. No country can present, at the present, a more illustrious faculty of gynecologists than America, many of whom are members of this Association. Gynecology is, therefore, of great professional interest to the American general practitioner, both in theory and practice. To know his duty, what can be done, what ought to be done, and what he can do with safety to his patient, and with the promise of success in gynecological cases is one of the most important problems that can possibly confront him.

This paper is written from the stand-

point of the general practitioner, for and in behalf of the rank and file of the profession, and is read here in the hearing of some of the most distinguished gynecologists in this country, with the hope that it may elicit such discussion, pro or con, that will throw some light from an authoritative source upon the duties and limitations of the "General Practitioner as a Gynecologist," applying to that large class of the profession who practice in the country or in the smaller towns.

The special environment of such a practitioner calls for some remarks. In the first place, most of his acts are subjected to the severest of all criticisms, to wit: That of incompetent critics. Anything that he does that is not in keeping with the popular idea of the matter in hand, will be looked upon with suspicion and distrust, and should an acident happen, woe be unto him! Let it be said with regret that such results, however inevitable, are not always defended by the other physicians in the neighborhood. So that a greater amount of courage and moral heroism is at once required of him. He has no hospitals, skilled assistants, nor experienced nurses. His work must be done in the homes of his patients, with such assistance as his local confrees are willing to give him, and with the family or some good Samaritan, who is not always clear of gossip, in the neighborhood for nurses. Such an environment necessarily limits the work of the general practitioner, not merely from policy but principle. Notwithstanding, in my judgment, he has a legitimate and necessary field of work, to which I briefly call attention. My remarks, of course, apply only to the instrumental treatment of this class of cases. So important a subject cannot be considered in full, nor in detail, but in a general way only.

1st. The general practitioner should not undertake work that can be better and more safely done by the specialist, provided one is attainable.

2d. He should be willing to do and attempt the most radical and dangerous operations when necessary to save life, provided a specialist or one better prepared to do the work cannot be obtained.

3d. In cases not necessarily dangerous, or in which life does not become more or less a burden, but in which a cure can be effected by a radical procedure, but which may be materially benefited, or symptomatically relieved by milder methods, he should adopt the latter and not the former.

4th. In many cases the field is clearly his own, belongs to him, and he should be prepared and competent to treat them with safety and success.

The most important, certain and effectual work of the gynecologist, is his abdominal and pelvic work. In no department of the profession perhaps, do the advantages of skilled work, nursing and suitable environment play as important a role in obtaining results as in this class of work. Therefore experience and preparation are essential requirements in electing to do laparotomies. Hence the general practitioner, unless he be a laporotomist in embryo, with aspirations to become a specialist, and must have experience, and therefore victims, should never elect to do this class of work. Yet he has a field for this class of work. No courageous, honest man would allow a woman to bleed to death from a ruptured tubal pregnancy; a fetal peritonitis from a ruptured abscess, or a general septic peritonitis in puerperal cases, etc., without giving his patient a chance for her life by promptly opening the abdomen, and meeting the clear indications there found. Nor would he allow a woman to die with an ovarian cystoma or bleed to death from fibroids, when a specialist cannot be obtained, with removing the former, and at least performing Battey's operation in the latter, provided he would not dare do a hysterectomy. In a general way then, it may be said that laparotomy work should not be done by the general practitioner, except in cases of emergency, and when a specialist cannot be obtained.

Cancer of the uterus is pre-eminently a case for the specialist, because complete removal of the organ is the most promising treatment for this class of cases.

Secondary or plastic operations upon the perineum, vagina and cervix while not dangerous require more than ordinary skill to obtain good results, and therefore belong to the specialist. No one can observe a number of operators do this kind of work; without being convinced that even among specialists,

there is a wonderful difference in the skill displayed, and also of the results that follow.

Electricity does not promise much under any circumstances in gynecology, and its use by the general practitioner is of doubtful utility and safety.

In the third class or cases not necessarily dangerous to life, and in which life is not a burden, but for the permanent cure of which a radical operation is necessary, but for the improvement or symptomatically relieving of which milder measures may answer, the general practitioner has an important field of work.

First and most important of this class are those cases of pelvic inflammation, in which as a rule there is more or less displacement of the uterus, which is fixed by adhesions, together with more or less tubal and ovarium involvement, all being more or less fixed in unnatural relations by the coincidental pelvic peritonitis.

Now in such cases if there be collections of pus in the tube, ovary, or encysted in the peritoneum, palliating measures are not only of little service, but some of them may be dangerous. Therefore a laparotomy and removal of the disease appendages and pus collections, is the proper treatment. But in such cases when the pus is drained e. g. a pus tube into the uterus or pelvic abscess through the vagina, laparotomy may not be necessary.

Now I believe that these are the cases, particularly if of long standing and recurrent, that the only cure is a laparotomy, removal of the diseased appendages, breaking up of the adhesions, ventral fixation, or some other operation to keep the uterus in place. That there are cases, however, in which complete resolution occurs, with restoration of function, I have no doubt, but they are very rare. What can the general practitioner do? Until recently, in my judgment, he could do very little. Hot water douches, painting the cervix and vault of vagina with iodine tincture, vaginal tampons soaked in glycerine, boro-glyceride, etc., salines, during the acute attacks or exacerbations, and general treatment to improve the health, formerly constituted his chief reliance. That many cases were thus symptomatically relieved; that the pelvic exudates are sometimes diminished, and even partial mobility of the uterus restored, in fact an improvement in both symptoms and pathological condition I can myself testify, but the treatment to be of service must be long continued, is uncertain and not very promising.

Prof. Polk, of New York, in my judgment, has greatly simplified the treatment of these cases by the use of the sharp curette, gauze, packing and drainage. By it more can be accomplished at one operation than can be done, if done at all in months by the older methods. My recent experience has convinced me of the great promise, utility and comparative safety of this operation. I am aware that this treatment is an innovation; that the use of the probe, curette or any disturbance of the endometrium when there are peri-uterine inflammations have been almost unanimously condemned by authorities. Notwithstanding sufficient experience is fast accumulating to prove not only the utility, but the safety of this procedure. This treatment followed up by the usual methods, will in my judgment absolutely cure some cases, and relieve symptomatically the majority. This operation can be safely performed by the general practitioner, who has ordinary skill in the use of instruments, and who can apply in practice, the principles of aseptic surgery.

Among the fourth class, or cases which properly belong to the general practitioner, may be mentioned the various forms of uterine inflammation, cervical, corporeal and general endo-metritis and metritis (subinvolution an areola hyper-plasia). These diseases if neglected may result in tubal or ovarian disease, and consequently in pelvic peritonitis, with displacement and fixation of the pelvic organs. The causes of these diseases in the majority of cases are to be traced to labor or miscarriage. Sepsis as a rule is the essential cause in the former either causing an endo-metritis resulting in sub-involution or possibly in the peri-uterine structures, resulting in sub-involution and endo-metritis. In miscarriage, in my judgment, the main cause is the retention of more or less of

the secundines, resulting in septic infection, inflammation, or in subinvolution than in endo-metritis. In such cases the probability is that there are either the remains of physiological structures, that have become pathological, or structures that are the result of pathological processes, in both cases structures foreign to the uterine cavity. Here the indications are clear.

1st. To rid the uterine cavity of all foreign structures.

2nd. To cause contraction in the subinvoluted uterus, thereby restoring normal circulation, and causing an absorption of hyperplastic elements.

3rd. To establish sufficient and adequate drainage, while the physiological process restores normal structure and function. These indications are promptly and effectually met by the curette and gauze packing. That the curette is an instrument of great practical importance is attested by the fact that almost all the authors recommend it as a last resort in the treatment of endo-metritis, and as an essential instrument in the treatment of certain forms of that disease. That the instrument can accomplish much in suitable cases, the testimony of all proves. The question therefore arises, is the curette, particularly the sharp, a safe instrument in the hands of the general practitioner? As formerly used by both specialist and general practitioner, it was undoubtedly often followed by bad results. That penetration of the walls of the uterus occasionally ocurred in the hands of the most experienced and skilled, that peri-uterine inflammation sometimes followed, are admitted. It may, therefore, be regarded as an instrument of danger if improperly used. If, however, it is made to play only its part in a thorough surgical operation, embodying all the principles of modern surgery, then it becomes no more dangerous than other surgical instruments in the hands of an ordinarily skilled operator. I, therefore, conclude, contrary to the teaching of authors, particularly Emmett and Thomas, whose writings have done more to formulate opinion in gynecology than any other authors in this country, that the use of the dull and sharp curette is safe in the hands of the general practitioner, constitutes the most important essential instrument in his gynecological armamentarium, provided he has ordinary skill in the use of instruments and uses it as advised by Dr. Polk, that is, in a thoroughly surgical manner.

The many indications for the sharp curette, the prompt and effectual results that usually follow its use, the almost universal opinion of gynecologists that it is an instrument for the specialist only, and therefore should be seldom used by the general practitioner, are the principal reasons I offer as an excuse for this paper, with the hope that such criticism will follow that will untie the hands of the general practitioner so far as the use of this instrument is concerned, that he may feel justified to use it in the treatment of many cases that he has failed to cure by the usual methods, thereby curing many, preventing tubal and ovarian disease, and symptomatically relieving many whose only hope of cure is by laparotomy, regarding it always as a part of a surgical procedure consisting of dilatation, douching, curetting, douching and gauze packing and drainage, with strict aseptic precautions, as a rule, under an anesthetic.

In concluding this part of the subject, I give it as my opinion that the introduction of a dirty probe, curette or other instrument through a dirty vagina and cervical canal, into a possible septic uterine cavity, is not only "gynecological tinkering," but practically malpractice. Hence all such procedures are surgical and should be guarded accordingly.

In concluding, there is one other thing to which I desire to call attention, although it may be regarded as obstetrical, and that is the immediate repair of lacerations of the tissues of the genital outlet, occurring during labor. According to my observation this is, as a rule, neglected. So far as the general practitioner is concerned, there are two main reasons why this is neglected. First, the majority of the lacerations either get well without operation, or according to his experience give no trouble afterwards. Second, it is a confession upon his part that there has been a tear, which is seldom discovered by the patient, or her nurse, and which is regarded by her and her friends as an

evidence of ignorance or neglect on his part; therefore, he generally does not look for them, or if he does, and finds them, he ignores them. These remarks do not, of course, apply in cases where the sphincter is torn.

Now, I believe that the majority of women suffer more or less laceration, and that the majority of these suffer no consequences. Hence I would not advise that it is always necessary to repair them, but I do insist that it is the duty of the general practitioner to examine every case, and if a lesion is found involving the deeper structures of the outlet, the fascia, muscles, etc., or in case of a comparatively extensive tear, he should advise his patient of the fact and insist on repairing it. At this time the operation is a simple surgical procedure of bringing together divided structures by the various forms of suture, buried, interrupted or continuous before retraction and cicatrization alter their normal relations, thus providing against the necessity of a plastic operation, which requires great skill, and before secondary lesions follow, attributable to the laceration.

So far as the implied confession of ignorance or neglect is concerned, which Professor Lusk says merits no consideration, a great deal depends upon the popular idea concerning the preventability of these lesions. If the prevalent idea in a community is that one of, if not the main duty of the physician, is to prevent these lesions, and that he can do so if he is educated in his profession, and if the physician is not established in reputation to render harmless adverse criticism (and who is?), and if there be a competing brother in the community who has had hundreds of cases without a tear (and where is he not found?), then I say it is one of importance and deserves consideration, and if womankind is properly treated, cannot be ignored. I believe it to be the duty of the profession to teach that the popular idea of supporting the perineum is a fallacy, and that the professional efforts in preventing tears are very largely futile, consequently that lacerations will occur in anybody's practice, and that it is no necessary reflection upon the knowledge or skill of the attendant when they do occur. When the necessity of primary operation for these lesions is properly appreciated by the general practitioner and realized by the laity, the plastic work of the specialist will greatly diminish.

In conclusion, I submit that the general practitioner can largely diminish the work of the specialist, particularly his pelvic work, by the application of well known surgical principles in the treatment of many of the local diseases following labor and abortion.

If I have succeeded in this paper to call sufficient attention to this important subject, that it (the subject) may be fully and freely discussed by the eminent authorities present, and if the contention of opinion here expressed tends to limit the work of the general practitioner, in work for which he is unfitted and unprepared, and which he should never do except in emergency, that is when the specialist cannot be obtained, and on the other hand, to enlarge his field of work in certain directions, particularly in the use of the sharp curette as indicated in this paper, I shall have accomplished my purpose, and in my judgment benefitted the patients of this class of cases and conserved the interest of both practitioner and gynic specialist.

LOSOPHAN.*

By Dr. EDMUND SAALFIELD.

Berlin.

THE Farbenfabriken vorm. Friedr. Bayer & Co. placed at my disposal for experimentation, a preparation, "Losophan," which, to judge from its chemical composition, seemed calculated to give favorable results in a series of external diseases. The correctness of this assumption is demonstrated by a considerable number of experiments made in this direction, which are reported in the following pages.

The chemical and bacteriological properties of this remedy will be considered in an exhaustive article, and only the most important facts are here mentioned.

"Losophan," from a chemical point of view, is to be regarded as a tri-iodo-kresol. It is produced by the action of iodine upon oxytoluyl acid in the presence

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of an exactly estimated quantity of alkali (carbonate or hydrate). Just as with bromine, by this reaction, the carboxyl group is displaced and converted into carbonic acid. The product of the reaction, having the formula C_6 H I_3 CH_3 OH, appears in form of white needles, with a melting point of 121.5. It is soluble in alcohol—although with difficulty, and readily soluble in ether, benzol and chloroform. When heated to 60°, it is readily taken up by fixed oils. In diluted soda, it is also soluble, but by concentrated lye, losophan is changed into a greenish-black amorphous substance, which is insoluble in alcohol.

Losophan burns up completely with formation of iodine vapors. It contains in round numbers about eighty per cent. iodine.

My first experiments with this remedy were made in the mycosis of the skin and first in parasitic sycosis. I employed it in two per cent. concentration with water and alcohol, equal parts, but as a fairly thick sediment was always frequent, I soon had recourse to a one per cent. solution. After the remedy had been employed for a few days, a yellowish sediment was also observed in the one per cent. solution, so that in place of equal parts of alcohol and water, I used seventy-five per cent. alcohol, and twenty-five per cent. water. This solution remained clear for a longer time.

The diseased parts were brushed two or three times daily with this solution. In most cases, epilation was resorted to, when necessary, in connection with the applications of the remedy.

As it would occupy too much space to give the different histories of cases in extenso, I have confined myself to a brief resumé of my results.

Losophan was employed in sixteen cases of mycosis tonsurans of the face and body (not the scalp). Of these, thirteen were definitely cured, while in the remaining three progressive improvement was noticed, so that under continued treatment with losophan, a complete cure would have been obtained. Unfortunately, the three parties withdrew from treatment when the subjective symptoms, such as itching, subsided, and the deformity had disappeared.

Of three children suffering from herpes tonsurans, of the scalp, one was cured the others, when considerably improved, left off treatment.

Three patients suffering from parasitic sycosis were much benefited ; two, when nearly cured, failed to return, while the other is still under treatment.

In a case of mycosis tonsurans of about three years' duration, which is yet under treatment, gradual improvement is taking place.

In pityriasis versicolor, losophan was employed in one and two per cent. solutions, and in one case, in form of an ointment (1:30). In two cases, complete cure was effected by a few applications with the brush ; while two others withdrew from treatment when the brownish discoloration had become less marked, and three others also failed to return.

In eczema, it was found that losophan had a vigorous action upon the inflamed skin, and readily produces irritation, so that it frequently had to be discontinued. It exerts a very favorable effect, however, upon chronic infiltrations and upon the itching of the skin. In three cases, losophan was also employed as an ointment of a strength of one-half per cent. with vasoline or lanolin. A large number of cases of eczema were treated with losophan, of which a few are reported as typical. Eczema siccum, two cases (children), in one the back, and in the other, both hands and forearms were affected ; same affection in two other cases (adults), in one affecting the neck, in the other the penis, scrotum, and the adjacent parts. Chronic markedly infiltrated eczema of back of foot and adjoining portion of leg in the case of a woman forty years old. Workman, aged twenty-eight, suffering from subacute papular eczema of the extremities attended with much itching. Woman, aged sixty-six, suffering from scaly eczema with formation of rhagades on the hands. Eczema siccum in plaques on the face of a young man, and a similar affection involving the face, neck and upper extremities of a woman, twenty-nine years old.

Of these patients, four were cured by applications of losophan, *i. e.:* One case each of eczema siccum of the neck and of the penis and scrotum, one case of papular eczema of the extremities with marked itching, and the case of eczema

siccum en plaques of the face, neck and arm, considerable improvement was effected in the case of the woman sixty-six years old, suffering from eczema squamosum et rhagadiforme of the hands, although a complete cure could not be obtained by means of losophan and other measures had to be resorted to. The same results were observed in the case of the young man suffering from eczema of the face. Owing to the irritation produced by the drug after a short period of employment, it had to be discontinued, in the case of the two children above mentioned, and in that of the patient suffering from chronic infiltrated eczema of the dorsum of the foot and adjacent portion of the leg.

I also employed losophan in a series of dermatoses with some success, although in view of the nature of these affections, it would have been too much to expect a complete cure in all of the cases. The good effect which the remedy exhibited in these conditions was evinced by a disappearance of the infiltrations of the skin produced by various diseases and by an amelioration of the itching. Its influence was most distinctly shown in prurigo, four cases being treated with losophan. It was applied in form of a one per cent. ointment, in one case a two per cent. ointment. The patients were children. Two of them were children one and one-half years old (the urticaria eruptions being very marked) and the others respectively four and six years of age. In all four cases the favorable effects were manifested by a diminution in size and partial disappearance of the nodules, relief of the itching and disappearance of the lesions from scratching. A definite cure of this troublesome affection, so frequently attended with recurrences, was obtained in one case; in the others, the palliative effect was so pronounced that losophan can be classed with other remedies having the same properties and is preferable to the majority.

The ability of the drug to relieve itching, as shown in a number of cases of eczema and prurigo, was also exhibited, although less distinctly in a few cases of pruritus cutaneous, in which no external cause could be found. Amelioration of the itching was produced in one case by application of a one per cent. solution, and in two cases by application of a two or three per cent. ointment and one per cent. solution were employed. In one case, the itching ceased for about one-quarter of an hour, the other cases were not relieved.

In sycosis vulgaris, a disease which taxes the patience of the physician and patient no less than prurigo and pruritus cutaneous, losophan was employed in six cases. I began my experimentation with sycosis with misgivings, since as is well known, in this affection, the skin is frequently so very irritable that the application of any remedy not perfectly indifferent, produces a violent inflammatory reaction. This fear was justified in the case of a patient whose entire face and neck was afflicted by the disease and whose skin was irritable in a marked degree. Even after the second application of a one per cent. ointment, a severe inflammation developed so that antiphlogistic remedies had to be resorted to. A better result was obtained in another case where the affection involved only the upper lip and vicinity. Here considerable improvement was effected by a one per cent. losophan ointment. Some of the pustules completely disappeared, others diminished in size. Unfortunately the formation of new pustules could not be prevented; finally when the skin became accustomed to the drug, resort had to be had to other remedies, as it was thought hazardous to try it in stronger concentration. In the case of another patient who came under treatment for a markedly inflamed sycosis of the right cheek, losophan was well borne. The affection had been present for half a year. The entire right cheek was of a dark red color and covered with follicular abscesses and numerous nodes. The diagnosis was lupus vulgaris. After application of a one per cent. ointment, and later of a one per cent. solution, all the symptoms rapidly subsided and after two and one half weeks' treatment, the nodules had completely disappeared, while slight redness and scaling remained in the upper half of the cheek. The patient, who considered himself cured, failed to return. A case resembling in many respects the one just described was considerably improved by application of a one per cent. ointment. In a fifth

case of sycosis vulgaris of the upper lip and chin, improvement was effected by a two per cent. and later by a three per cent. losophan ointment, but the remedy had to be discontinued after a time on account of the development of irritation. In the case of a man sixty-three years old, suffering from sycosis of the upper lip, the remedy was better borne, being employed in the form of a one per cent. ointment; within a comparatively short time, after numerous other remedies had been tried in vain, a complete cure was obtained.

Similar results were observed in acne vulgaris, and acne rosacea. Improvements always followed applications of a 1 to 3 opo ointment, although no marked irritation appeared, unless its use was too long persisted in. The fact that the affection frequently recurred cannot be charged to the remedy, as this usually occurs with other measures.

In a case of acne varioloformis, which affected the forehead and had invaded the scalp, a flattening of the nodules was first observed, but losophan had to be soon discontinued, because after a few applications a violent irritation ensued, which recurred after each subsequent application, even when made with the utmost care.

Six cases of psoriasis vulgaris were treated with losophan. In this affection the remedy was employed in traumaticin, one per cent., as an ointment, one, two, five and ten per cent. The one per cent. losophan tranmaticin solutions, as well as the one and two per cent. ointments, were practically useless; a scarcely noteworthy effect was obtained from applications of a five per cent. ointment, while the result from a ten per cent. losophan ointment was so slight that no further experiments were made with the remedy. It is worthy of note that even ten per cent. ointments failed to produce irritation, and this fact probably explains the ill success from this treatment, since the other remedies employed successfully in psoriasis almost always produce a more or less marked reaction, which sometimes becomes disagreeable.

In a few cases of epizoen, favorable results were obtained from the use of losophan. A few cases of pediculosus capitis and pubis were cured by a one per cent. solution with addition of twenty-five per cent. vinegar, and a number of cases of scabies by applications of two, two and one-half to three per cent. ointments. In a few cases of scabies, it seemed to me as if a more rapid result was obtained by the other preparations in common use.

A cure was also effected in the case of a girl three years old, who suffered from cutaneous ulcers in the gluteal region which in consequence of the secretion had produced a colpitis. Losophan was here employed in form of a dusting powder, one per cent.

The same mixture proved a serviceable dressing material in the case of a patient who had been operated upon for chancre and phymosis. Healing was obtained by dusting the wound with a one per cent. losophan powder. A diminution of the discharge, and tendency to healing was also observed after applications of this powder in a case of ulcer of doubtful origin. Unfortunately the patient passed from observation. On the other hand, the results in typical ulcer dura were so slight in four cases, that mercurials had to be resorted to and losophan was abandoned without further trial.

For the sake of completeness, I would mention that, as might be anticipated, the application of one per cent. losophan solution with a brush had no effect in a case of pigment hypertrophy and that in another case of extirpation of buboes, the application of a one per cent. losophan traumaticin caused rapid healing of the wound.

If I review in brief what has been said above, concerning losophan, the following conclusions may be formulated:

That losophan applied in the above described manner, has a favorable influence in the most common dermatomycoses, herpes tonsurans and pityriasis versicolor and the diseases produced by epizoa, in a series of cases of which a complete cure was obtained. Losophan has also proved useful in the treatment of prurigo, in a few cases of chronic infiltrated eczema, sycosis vulgaris, acne vulgaris and rosacea. A favorable effect, although less pronounced, was observed in a few cases of idiopathic pruritus cutaneous. As a palliative remedy for the relief of itching, losophan was of little

service in urticaria and it proved useless in the treatment of psoriasis vulgaris and primary syphilitic lesions.

When used as a dusting powder, losophan exerts only a slight effect in diminishing secretion, and is less efficient than the other remedies commonly employed for that purpose.

The employment of losophan appears contra-indicated in all acute inflammatory affections of the skin, in which even in weak solution, it readily gives rise to irritation.

TYPHOID FEVER.

By J. W. KING, M. D.,

SCRANTON, PA.

I TAKE the liberty of reporting a very interesting case, and, as I noticed in this morning's arrival of the Journal that you will soon again issue another number on Typhoid Fever, it therefore comes in order. We are having in this city typhoid fever a little short of an epidemic, which must certainly be traced to bad sewerage. I myself have attended about twenty-five cases within the last two months, but with the exception of the one in question all were of a mild type. Some physicians were not so lucky, quite a few cases terminating fatally.

Mrs. B., age thirty-three, commenced to ail on or about September 6th. I was called to see her September 26th, and found her with the following history. Malaise, headache, fever, clean tongue, bowels constipated, urine abundant, smoky, no abdominal pain or gurgling in the right iliac fossa, her temperature on morning of September 26th registered 104⅕; E. 101⅕, dry skin; gave ℞—Phenacetin gr. x every three hours. ℞—Epsom S., tablespoonful; and as I was sure of a typhoid, I gave ℞—Zinc sulpho-carb. gr. ijss, every three hours. September 27th, bowels moved freely, three or four times; morning temperature, 105; E. 104⅖. I increased zinc 2½ grs. to every hour. September 28, no change, same as on September 27. September 29, morning temperature, 106⅘; E. 107⅕, ordered zinc S. C. gr. 7½, salol gr. x, every third hour. September 30, morning temperature, 101⅕; E. 106, same treatment as day preceding. October 1, morning temperature, 104, abdomen began to enlarge. I feared hemorrhage and as z.s.c. is recommended to reduce typhoid temperature I began to lose faith and went back to ℞—Plumbi acet. et. pulv. opii denarcot. āā gr., ij bism. subnit. pulv. carb. veg. āā gr. v. Every hour one powder *with* ℞—Ergotin gr. ij, pulv. digitalis et ext. nux vom. āa gr. ss; one pill every three hours, for the heart was unsteady. At 4.30 P. M. she had a hemorrhage from the bowels; about one pint passed her; in the early morning I had discontinued the zinc; in about one hour after the hemorrhage I saw her and found collapse. I gave her a hypodermic, ℞—Morph. sulph. gr. ss, sp. aetheris co. gtt. xxx, Tr. strophanthus ♏v. and brandy. She soon rallied, abdomen greatly distended and very tense; for that condition I had applied a flaxseed poultice and a ʒi of spts. terebinth sprinkled on it to be renewed every two hours. In the evening she had a temperature of 97, at time of collapse 96. Dr. Wehlan was called in consultation at 9 P.M., but no change in treatment was thought, at the time, advisable. October 2, morning temperature, 102⅕ at 7.30, and at 11 o'clock one quart of blood passed; [a hypodermic of morphine, etc., and the same treatment continued; evening temperature 106; this second hemorrhage was not attended with such a great depression as that of the day preceding, abdominal distension decreased; at noon a temperature of 105. I should have added that for zinc s. c. discontinued, I began giving, ℞—Phenacetin, gr. x salol gr. x, but I now stopped it and resorted to cold sponging.

October 3d, morning temperature, 105, abdomen again commencing to distend and at 4 P. M., a quart of blood passed, leaving her in profound collapse; same treatment employed as October 1st; temperature 97, and continued as such until midnight, when the rectal registration was 104. October 4, morning temperature, 104, great abdominal distension. I considered her end close at hand, but gave her hypodermic morphine, ether, etc., and brandy. I remained in attendance the greater part of the day, took numerous temperatures, now normal then subnormal, now and then she had 104-106; patient being unconscious. Entire body was cold; exhaled breath was cool; for at

least three hours I could not hear heart's action, respiration ceased, but after a period of six hours patient rallied ; she was then given three tablespoonfuls of brandy and beef peptonoids. Her temperature now became steady at 103 for four hours, when she again passed in the same condition which lasted until evening of October 5, when she said "I feel well." I gave her acetate of lead and ergotin and continued that until evening, October 8. She had bowel movements from October 5 midnight until October 9, but no blood. October 9, temperature at seven o'clock P. M., was 106, with great delirium. When I arrived they had her tied. All medicines stopped and had renewal of flax seed made, for the abdomen was again greatly distended. I gave ℞—Hyoscyamine cryst. gr. $\frac{1}{64}$, Morph. sulph. gr. ss. Am. brom gr. xxx, Chloral hydrat gr. x, every two hours. She had been given ten doses, no effect on delirium and still not even sleepy, (I might add that since last hemorrhage she had but ten hours sleep, may also add that no phenact. and salol was given after first hemorrhage). I had her well sponged off, discontinued the hyoscyamine and gave ℞—Paraldehyde ʒiij, caffeine mur. (heart was becoming weak) gr. 40, oil gaultheria ♏xij, Pulv. acac. ʒi, syr. prun. virg q. s. ad ʒiv, M. Sig. Tablespoonful every hour until sleeping. After taking the above and not sleeping yet, delirium was at its height. I went back to hyoscyamine and several doses brought about a sound sleep of four hours. October 10, morning temperature, 104, no abdominal distension, no tenderness, but complained of a general soreness in abdomen, no delirium. She again fell asleep after giving brandy ʒ ss every hour. At noon, temperature 103, good heart, evening temperature 104, intermittent pulse, brandy ʒi every hour, and three per cent. solution nitro glycerine gtt.iii, tr.nux vom. gtt.xii, tr. strophanthus gtt. viii and spts. eth. co. No change of intermittent heart until October 11, at 11 o'clock, when heart became normal, when I stopped medicine and gave brandy ʒss every hour.

October 11, she again became delirious; gave hyoscyamine, etc. She took several doses and slept well, with a good heart. The tongue was beginning to coat. Morning temperature, October 12, was 100. Abdomen not very tympanitic. Temperature, October 12, 3 P. M., 100 ; 6 P. M., 102 ; 9 P. M., no abdominal distension whatever, and very little soreness. She says, "I feel good, and know that I am going to get well." For the last ten days she wanted to die. Now, a few words regarding the pulse. I have not given that any attention as far as frequency is concerned, but excluding the period of collapse, pulse was always ranging from 130–160, full and strong. Patient is a brunette, weighing probably 100 pounds, tall and slender, and no one would believe that she could go through such a siege. I would now be very much surprised if this patient should not recover, without any consequences, and that is why I now write you. Doctor, if you can make any suggestions regarding the case, I would be pleased to hear from you through your journal, for if I was to treat a like case to-morrow, I would not hesitate to employ the same treatment. I would especially like to have an opinion on the zinc salt, why it failed, as you are the advocate of the drug. I have practiced medicine six years, but never met with such a remarkable case. I once had charge of a physician's practice, five years ago, who was abroad, and an epidemic broke out, and treated something like fifty or sixty cases, the mortality being eight, it being a country town, and, to all appearances, ought not to be productive of typhoid fever, but I certainly had no such experience with the above cases as this one herein described.

TYMPANITES OF TYPHOID FEVER.

By R. M. HARBIN, M. D.,

CALHOUN, GA.

TYMPANITES is one of the most troublesome symptoms of typhoid fever and at the same time furnishes occasion for two serious accidents, viz: hemorrhage and perforation. There are two elements in the causation of tympanites; fermentative changes in the contents of the intestines and paralysis of the muscular coats of the bowels ; so tympanites is a symptom of great prognostic

value. As to the treatment, remedies are more or less disappointing, but the following plan has proved most satisfactory in my hands: Paint the bowels night and morning with tincture of iodine until it blisters and then suspend for awhile. During the intervals the turpentine stupe may be used, but if the temperature runs up, use cloths wrung in iced vinegar and water, changed every few minutes according to the intensity of the fever, and if the temperature is 104° or higher use ice-bag pretty continuously. The weight of the ice-bag is no objection; I think it is an advantage. Many patients object to the chilling effect of the bag, but by wrapping the bag in flannel that objection is removed. I am fully convinced that the continued use of ice is harmless. Iodine has an alterative effect over the ulcers of Peyer's patches and the swollen mesenteric glands. Internal treatment should not be neglected. Turpentine in emulsion and sulpho-carbolate of zinc should be used along with a carefully regulated diet. There is no substitute for fresh milk, to which lime water may be added. Overfeeding is a great danger, when tympanites is great. During or at the latter part of the third week, a teaspoonful of milk, every hour during the twenty-four hours is sufficient, and in very critical cases this amount should rarely be exceeded. Soups and broths should be used only as a change. Stimulants should be used sparingly, and only when temperature is lowest. Tepid enemas to which assafœtida may be added are useful. Typhoid fever is one of the most obstinate and fatal diseases we have to deal with in this section.

TYPHOID FEVER.

By WM. PATCH, M. D.,
Ellsworth, Ill.

NEARLY every state has a sure specific for typhoid fever and some eastern ones claim several. During my student and hospital experience I had an excellent opportunity of watching and comparing the different treatments and results, the latter which was uniform, while the Materia Medica was as varied as the remedies for vomiting of pregnancy.

Have watched severe cases that were attended by very high temperature, delirium, excessive tympanites, and hemorrhage, treated by infinitesimal homœopathic tinctures in one ward, and in another with large doses of quinine, acids and all the new antipyretics, and have seen them make a good recovery. Then in another ward I have seen cases carried through a six weeks' course with a temperature of 106° F., on nothing in the way of medicine but ʒss doses of spirits mindereri every four hours. Noticing the different ways of handling typhoid fever has made me skeptical in the use of drugs, but has made me a firm believer in good nursing and diet and symptomatic treatment.

By good nursing I mean a careful trusty nurse who can say No, and one who will carry out all of your instructions. If possible I prefer two members of an interested family, unless too sympathetic, to change hours and have entire care of your patient. In this way you will not only get their full support, but by this dependence or reliance placed in a nurse you stimulate them to vie with each other for the silent encomiums of the patient. Having once secured the support of a nurse it will remain to the end of the case.

Good rich milk I regard as the principal article of diet, given regularly and not poured down as one would take a drink of water when thirsty, but prop your patients in a semi-recumbent posture and let them be ten minutes in sipping a glass of milk. The ordinary glass or tumbler holds eight to ten ounces and if given every four hours your patient will get sufficient nourishment.

Tonic doses of quinine every four hours during the course of the disease, and if the afternoon temperature is anticipating, give fifteen to twenty grains of quinine, at from three to seven o'clock A. M. In giving an antipyretic I usually give enough to produce an effect which will be lasting.

If bowels are too loose, with profuse sweating, aromatic sulphuric acid has proved an efficient drug. For the dry tongue and tympanites turpentine is reliable.

Dr. Alexander W. Biddle has removed his office to Bethlehem Turnpike, Chestnut Hill, Philadelphia.

The Times and Register.

A Weekly Journal for Medicine and Surgery.

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CARDIAC TONICS.

AT a late meeting of the British Medical Association, an interesting debate was held respecting the action of the cardiac tonics, digitalis, strophanthus, convallaria, caffein and spartein; digitalis being taken as representative of the class. Dr. Broadbent said (in substance) the *physiological action* of this drug is a direct stimulation of the muscular fibres of all the cardiac-vascular system, improving the contractility of the heart, arterioles, and capillaries, independently of any intermediate nervous influence. The *therapeutic value* of this property is evident when the transit of blood through the heart is hampered by disease. The ventricles, by their improved contraction, help to fill the arterial side of the circulatory system; and improved suction power during diastole helps to empty the veins and relieve the venous plexuses and abdominal organs. The systole is also improved, and the heart invigorated by the physiological rest it obtains through prolongation of the diastole. The improved contraction of the arterioles and capillaries hastens the blood-current, assisting the propulsive force of the heart, better than could be done by flaccid dilated vessels, and favoring the absorption of effused fluids. In mitral regurgitation, digitalis is always of great service. The returning blood dilates the left auricle, and drives the flowing current back again. This obstruction causes resistance to the flow through the capillaries, and to overcome this, the right ventricle has to work with increased vigor, causing hypertrophy. Again, distension of the left ventricle, by the high pressure of the left auricle and pulmonary veins, causes dilatation, thus in mitral regurgitation, the compensation has to be supplied by the right ventricle; and it is this portion of the heart which is amenable to the action of digitalis, for this drug always neutralizes the effects of regurgitation, unless the right ventricle is seriously disabled by disease. In mitral stenosis, digitalis may do harm, for the vessels are already too much contracted, and the remedy would increase the evil. Sometimes it does a little good at first, by contracting the right ventricle; but it disorders the heart beats, and its power for evil counterbalances the good. In aortic regurgitation the blood is either defectively propelled into the arteries, or there is obstructive back-working through the lungs and right heart, causing venous obstruction and dropsy. When the blood is defectively propelled, digitalis is not beneficial; but in the other case, it is of decided value, especially when there is dropsy. In aortic stenosis, when there is back pressure in the pulmonic and venous circulation, through dilatation of the left ventricle, digitalis is serviceable, but when the disease is due to limited supply of

arterial blood, through obstruction, it does harm. In dilatation of the heart, digitalis does good when the walls of the ventricles are in fair condition, not otherwise. Blue mass and calomel are here more appropriate, by unloading the liver, relieving the right heart, and lowering arterial tension. In adherent pericardium—a not infrequent result of mitral disease—the right ventricle is impeded from lending assistance to the left, symptoms may become prematurely developed, often causing sudden death. Cardiac tonics are here of little use. Digitalis is very beneficial in the weak heart of typhoid fever and pneumonia; but in Graves' disease, tachycardia, and in some forms of palpitation, and irregular pulse due to reflex disturbances, it is useless. Strophanthus is preferable to digitalis, only when the arterioles need no stimulation. Citrate of caffein increases the solids of the urine. It is often a useful adjuvent to digitalis. The same may be said of spartein. Convallaria is valuable in nervous palpitation.

Dr. Lauder Brunton said that the contraction of vessels was sometimes too great for the heart to overcome, and cardiac tonics might prove injurious. In such cases, they would be improved by combination with nitrites, which dilate the vessels. Strophanthus acts more on the heart than on the vessels, also oxy-spartein. Digitalis slows the heart not only by its action on muscular fibre, but also on cardiac nerves.

Dr. Clifford Allbutt said that adjuvants, such as massage, etc., help the action of cardiac tonics by clearing up the arrears produced by long-standing defects of a weak heart. Gastric congestion, hepatic fullness, retained waste in the muscles, etc., have to be remedied.

Prof. Ebstein said that remedies which regulate the cardiac functions, as well as the excitants, should not be used unless the patients could be kept perfectly quiet.

Dr. Oliver said that patients apply for relief, not because they have mitral or aortic regurgitation, but because compensation has broken down. The left ventricle becomes dilated, and cardiac tonics are needed. Adonidine is useful in traumatic aortic regurgitation. Strychnine or nux vomica are better than digitalis for the dilated hearts of drinkers.

Dr. Lindsay said digitalis is best in mitral regurgitation. He gave belladonna in pure aortic obstruction. In aortic regurgitation digitalis is fickle, sometimes doing good, sometimes the reverse.

Dr. Stockman advised the use of small doses.

Dr. A. J. Harrison advocated perfect and continued rest in all cases of heart disease.

Dr. Handford said digitalis contracts the small arteries and raises the vascular tension, thus having an ill effect on aortic regurgitation. Digitalis is of great value in anemia, when combined with iron.

Dr. Broadbent, in reply, quite agreed with the value of rest, when compensation had broken down ; also he approved of mercurials. A dose of calomel is an excellent preliminary to the administration of digitalis. He also agreed with exercise, in some cases. In advanced aortic incompetence, digitalis might prove dangerous, and nitro-glycerine, which has a directly opposite effect, might render service.

Dr. A. N. Bell and wife celebrated their golden wedding, November 22. Dr. Bell is the well-known editor of the *Sanitarian*, the leading hygienic journal in this country. We wish our colleague and his consort many happy and useful years, and greatly regret our inability to be present on the occasion.

Letters to the Editor.

THE TREATMENT OF TYPHOID FEVER.

I AM aware that the treatment I use in typhoid fever is somewhat at variance with the one usually accepted by most practitioners. But I have no apologies to offer for it, as it has stood by me in times of need, rendering valuable aid, and saved my patient money, time and pain. It is this: If I see the patient before the close of the first week I give him the following:

℞.—Hydrarg. chlor. mitis.
Potassii Nitrat.
Doveri pulv. áa gr. xv—xxx.
M ft. pulv. no. iii.
Sig. One powder every three hours.

If his bowels do not move in two or three hours after taking the last powder, I give him a table-spoonful of castor oil. If his temperature should be any elevated after his bowels have operated, give two or three ten grain doses of quinine sulphate. Now if the opinion of a practitioner, who has been eight years in practice has any value, it must be acknowledged that typhoid fever can be aborted; for I have certainly seen it done time and again with the above treatment. Suppose the treatment does fail to abort the disease nine times out of ten. Have you done any harm? Most assuredly not. You have saved one patient from all the dangers that menace him, we will say in just a typical case of typhoid fever. And if it be true that the typhoid bacillus makes its ingress into the blood through Peyer's patches, who knows how many thousands you have eliminated from the bowels of the other nine patients? And by the above treatment you have not only put the stomach into a better condition, but you have also increased the secretion of the kidneys and skin, which is an important consideration in the proper management of this disease. Should the abortive treatment fail or should I not see the patient until after the first week, I would then not advise so active a treatment; for I would expect harm to result. I believe it would favor intestinal hemorrhage and it certainly would perforation. Would advise rather a symptomatic treatment, giving such agents as the symptoms indicate; but I still give an antiseptic and after trying acid carbolic, sulphite of soda, salol, chlorine gas in solution, my preference is the sulpho-carbolate of zinc, an agent I believe first suggested by Dr. Waugh in this disease, in two to four grain doses every three hours. And I believe it will give better results when given in powder or pill than in solution. The temperature generally comes down one or two degrees after about forty-eight hours' use and remains about stationary, allowing for the morning remissions and the evening exacerbations; and takes about its usual course in a milder form than it seemingly would had not the sulpho-carbolate been used. I give quinine in two to three grain doses every three or four hours for its tonic effect and the heart, and if the edges of the tongue are red I combine the quinine with dilute muriatic acid. Should the tongue become dry and fissured, with diamond shaped patches on it, I give turpentine in emulsion every two or three hours. If tympany is marked, I order the abdomen bathed with a solution containing turpentine one part, and sweet oil two parts. These I apply three or four times a day, after each application covering the part with flannel or, if pain is excessive, a light hop poultice containing a little laudanum is preferred. If the patient is restless, the delirium of an active type, an opiate will render valuable aid, preferably the powdered, unless there exists a condition of obstinate constipation. Where constipation is present, an enema of warm water and soap will answer all purposes. If diarrhœa be present, unless the bowels shold move more than three or four times in twenty-four hours, it need occasion no alarm. Should the number of the discharges exceed this, it requires active treatment; powdered opium combined with the acetate of lead has given me the best results. Occasionally there will be excessive epistaxis. Theoretically, ergotin would seem to be *the* agent; but practically it will most generally fail to arrest the bleeding. The worst case I ever saw was speedily controlled with a warm solution of alum and tannic acid. But should this fail, resort can be had to the tampon; if the tampon is properly applied, it will surely arrest it. I would

advise the removal of the tampon in, and not to exceed, eighteen or twenty hours. Should the bleeding continue, wash out the nose with warm water, containing some mild antiseptic; and re-apply the tampon.

When perforation takes place, the result is almost always fatal; but, in the few recoveries reported, opium, in some form, was used freely. To reduce the temperature, there is nothing that I regard as superior to cold sponging of the entire surface of the body every two, three, or four hours. The patient may at first object to the use of cold water, or the friends may hold up their hands in "holy horror," but persist, and, generally after three or four applications, the patient will call for its use. The cold sponging, besides its antiseptic effects, quiets the delirium and acts as a tonic to the general system. To this may be added one five grain dose of phenacetin at night, if the temperature exceeds 104° F. But, as a rule, I regard the coal tar derivatives as dangerous. The patient should be kept strictly in the recumbent posture, and not a morsel of solid food allowed until at least five or six days after the evening temperature is normal. Milk should form the basis of the diet, to which may be added raw eggs and lime water, as occasion requires. Beef tea or essence renders valuable service where from any cause the milk is not well borne. The beef essence prepared by John Wyeth & Bros., Philadelphia, or the preparation known as Bovinine, either will answer the purpose. Now, in conclusion, and especially in regard to the abortive treatment, you that have never tried it, don't say that typhoid fever can't be aborted. How do you know it can't? I ask nothing but a fair trial. Let facts speak out, and theories go overboard. In justice to myself, I will say that the treatment is not original with me.

E. T. W. Hall, M. D.

Freemansburg, W. Va.

BLOOD POISONING.

THIS term is commonly used to designate the absorption of septic products by the blood, such as occurs in pyæmia and septicæmia; but blood-poisoning properly so-called, always results, either from detention in the blood of certain constituents intended to be removed from it, or from accumulation of other ingredients that are entirely foreign to it, no matter through what channel they may have entered. They may have originated *within the stomach*, or may have obtained entrance *from without*; they may have passed into the blood by way of the *lungs*, or may have gained access through the *body*. As examples of poisoning *from within*, we may have the blood overladen with some natural constituents of the system, as sugar and albumen; or with some of the elements of excretion and secretion, as urea or other results of disintegrated tissue, and the products of bile; these conditions being due to imperfect assimilation. Blood-poisoning may enter the stomach *from without*, through the media of food, water, or other fluids, giving use to various disturbances, and often to diarrhœa, dysentery, typhoid fever, and cholera. Poisons in the form of contagious germs may assail the blood by the passage of contaminated air through the *lungs*, causing small-pox, diphtheria, scarlet fever, typhus fever, measles, etc., and these diseases render the blood capable of transmitting similar contagions. Inhalation of certain gases and vapors, as carbonic acid and carbonic oxide, in the form of coal-gas, choke-damp, and charcoal fumes, also poisons the blood through the agency of the lungs, and either causes death at once by apoplexy or asphyxia, or, later on, by coma, tetanus, or pneumonia. After recovery numerous boils frequently appear. The intoxication induced by effervescent wines in the stomach is also partly due to the passage of carbonic acid into the blood. The principal poisons that obtain access through the *body* include dyes; secretions from diseased cattle; matter from decomposing carcasses; virus of certain animals when rabid, and of venomous reptiles, fishes, and insects; and unhealthy vaccine lymph.

Sugar and albumen, accumulating in the blood, produce well-known effects on the system, and either diabetes or albuminuria may cause death by exhaustion, secondary complications or coma. When

urea is unduly retained in the blood, through incompetency of the kidneys or liver, or through the excessive tissue-change attendant upon fevers or over-exertion, uræmic poisoning ensues; this, in turn, may excite inflammation of the heart, lungs, or other organs, and often fatal convulsions and coma. Accumulation of bile in the blood-cholœmia-occurs in derangements and diseases of the liver, and is characterized by yellow pigmentation of the skin, mucous membrane, and secretion. Less important ingredients, as ammonia, uric acid, acetone, and fatty matter, may collect in the blood in poisonous quantities, causing ammoniæmia, lithæmia, acetonæmia, and chylæmia.

Dyers are apt to suffer from crops of boils, and various skin affections. Farriers, knackers, herdsmen, and stablemen are exposed to splenic fever and other forms of blood poisoning, from diseased horses and oxen, and are liable to carbuncles, glanders, farcy, gangrene, and malignant pustule; and tanners, flayers, and wool sorters, sometimes fare little better, by handling diseased cattle after death. Accumulation of septic matter in the blood often occurs as a result of local wounds of tissues and veins, surgical operations, and diseases of the urinary organs and internal ear; and may be generated in the body, or introduced from without. The result is pyæmia, which is often attended by venous thrombi and inflammation of the spleen, and always by the appearance of eruptions, suppurations, and secondary abscesses; ending, in bad cases, in exhaustion, coma, and death. Septicæmia is a general blood-poisoning, due to accumulation of putrid products, by absorption from without; it does not propagate itself, and it is not accompanied by the usual abscesses. It is a common result of retained blood-clots and fragments of the placenta. Both pyæmia and septicæmia are menacing dangers to dissectors, surgeons, and parturient women. The bites of some animals, as dogs, cats, wolves, and foxes, when in a rabid state, are poisonous to man, exciting spasm of the pharynx, chest, and other parts, and often causing death, long after the infliction of the injury. The poison is probably absorbed through the veins. The virus of venomous reptiles consists of a secretion which enters the blood at once, exciting serious local and constitutional mischief, or causing death by arrest of respiration, the nerve-centres being paralyzed through the agency of the circulation. Toads and salamanders may poison the blood; also some varieties of fishes, as the sting-ray and jelly-fish. Many insects, as centipedes, scorpions, hornets, tarantulas and other spiders, wasps, bees, and certain beetles, cause more or less local trouble and general blood-poisoning. And, while healthy vaccine lymph simply evokes a mild reproduction of its disease, unhealthy or tainted lymph may poison the blood, by setting up erysipelas, or by the introduction of specific constitutional disease.

LOUIS LEWIS, M. D.

"As our staunch little blood-vessels carry their freight
To its docks in the lungs, to replenish its state,
Then on through the heart, to engage in nutrition,
So we wish a fair sail for our Christmas edition.
May our journal sail on, with its cargo of knowledge,
To all doctors in practice, and students at college,
Improving them all with its wide information,
And nourishing *us*, through a big circulation."

THE VALUE OF ELECTRO-DIAGNOSIS IN SOME CASES OF SPINAL PARALYSIS, WITH RESULTS OF TREATMENT.

IN describing the following case it is my desire to add further proof of the value of the electric current in the diagnosis and treatment of some of the diseases of the nervous system.

A young man of seventeen years, one of a family of seven children, five of whom, and the mother, died from consumption. At four years he was injured in the back, after which Potts' disease developed, resulting in a very prominent deformity and dwarfage in height.

Two and a half years ago, after bathing a number of times in a mill pond, he suffered from severe pains in lumbar spine and legs. This condition continued for two weeks, followed by complete motor paralysis of the lower extremities.

The family physician diagnosed paralysis, caused by pressure on the cord in deformity, and after treating to no effect, pronounced the case hopeless. Another physician was applied to, who coincided with the first. Afterward the patient was taken before a local medical society, where thirteen physicians present agreed with the former opinions.

In Autumn of same year, about four months after the onset, he was brought to my office, where the above history was given me and prognosis conceded to provided the former diagnosis was correct, but as the deformity in spine had to no noticeable degree changed for years, I thought there might be doubts in this being the immediate location of trouble.

On making examination with the galvanic and faradic currents I found normal contractions from both, until I descended the spine to the second lumbar vertebra, where they were lost even to a very strong galvanic current, but found contraction of degeneration in the legs, and decided atrophy, no tactile anasthesia, yet sensation of heaviness, and that the legs felt too large, considerable loss of control of sphincters existed.

With the above conditions I began a not very promising case, yet was positive the former diagnosis was incorrect, and believed we had the results of leptomengitis in the regions of anterior and antero-lateral lumbar spine, with possibly some inflammatory extension to the substance of the cord.

I began electrical treatment with galvanic current, anode to lumbar spine, and cathode to fossa, behind angle of jaw, each side three min., mild current, followed by anode at hips, large sponge, with cathode over surface of legs, each six min., repeated four times a week, with tablet of ext. ergot gr. ¼ before meals and at bed time. This treatment was continued for about two months, when muscles contracted to galvanic normally and strong faradic current, when latter was used on legs, but galvanic continued on spine as begun. The feet and legs could be moved now by volition very noticeably, and could bear some weight on limbs by holding to objects. Treatment was now followed less regularly, but improvement kept on, and patient soon began to use canes to move about the room, and within six months from the time I first saw him, he walked unaided by artificial help, and last summer he performed the work of a full hand in harvest field in mowing and horse-raking, and even on hay-wagon, building loads. Rides on horseback, walks when and where he pleases, now muscles fully restored in size, and is eminently grateful for results.

TRUMAN COATES.

RUSSELVILLE, PA.

COCAINE ANÆSTHESIA.

IN your issue of the 10th inst., under the title of "External Hemorrhoids," you say: "Anæsthetize the skin and mucous membrane."

The skin cannot be anæsthetized by a solution of cocaine applied on cotton. Then: "Inject six times half a syringeful of cocaine solution two per cent.;" the average hypodermic syringe will hold 30 m. Six syringefuls, 180 drops, two per cent. of which would be $3\frac{2}{5}$ grs.—a dose which does not require comment.

"When complete anæsthesia has been produced, introduce a speculum, and dilate the sphincter." At this stage of the treatment it would perhaps be as well for the operator to wrap his speculum in the remaining cocoainized cotton and retire as precipitately as possible—otherwise, wouldn't the thumbs be good enough?

EMERY H. LEYMAN, M. D.

HUNTINGTON, IND.

[The item is taken from *La Pratique Journaliere des Hopitaux de Paris*, where, on page 193, Reclus says: Enfoncant alors un doigt dans le rectum, faire de l' autre main tenant la syringue de Pravaz, avec une solution a 2 p. 100, six piqures d' une demi-svringue chacune, tout autour de l' anus," etc. The translation is correct; the value of the advice given, our readers are quite capable of judging for themselves.—ED. T. & R.]

LUPUS VULGARIS.

LEARNING of your newly-instituted "Bureau of Information," through THE TIMES AND REGISTER received today, I hasten to take advantage of your very kind proposition, by asking your advice in a case of lupus vulgaris. The patient is a man, about fifty-five years old,

who had a growth the size of a chestnut on the right cheek, over the molar bone. I removed it by electrolysis, to the level of the skin, but it is returning. Another appears to be coming on the other cheek in the same situation. His general health is below par. I gave him Wampole's preparation of cod-liver oil, and he now looks better, but I failed to reach the bottom of the affection on his face. What method would you advise as curative? What would be the effect of a rather blunt electrode pushed into the part by electrolysis, using cocaine as a local anæsthetic?

TRUMAN COATES, M. D.

RUSSELVILLE, PA.

[In reply to the communication of Dr. Coates, I would suggest that he again employ electricity in the case of both the old and the new lupus; the current should be as strong as can be borne comfortably—say from twenty to forty milliamperes. I think it not advisable to use cocaine about the face if the patient can stand the electrolysis without anæsthesia, and it is not very painful if begun at a low power and slowly intensified. The application ought to be made as nearly at the centre of the growth as possible, allowing the needles to point toward the base, and they should be frequently removed to new positions—the sitting lasting about half an hour. It is preferable to operate on one side at each time only to ward off inflammatory complications. If dizziness is complained of, let the current fall till this is not apparent; if the galvanic taste persists after the seance, a little coffee chewed slowly will stop it, and this is sometimes a nasty accompaniment of electrical work about the face, for it will persist for days at a time in some people.

Be careful not to touch the periosteum with the needles when the current is on, as ulcer sometimes forms, and any electrical sore of that nature is slow to recuperate. The sittings may be at intervals of two days, if the one is not sufficient, but with a tumor of the size named, one application may be enough. Of course *both needles* must be entered in the spot at the time, not one in the lupus, and one elsewhere. If they stick when moved, reverse the current for a second or two, and this will loosen them, but it does no harm to pull them out if they do stick, unless the patient objects too strenuously.—W. R. D. B.]

A NEUROLOGICAL NUMBER WANTED.

I WILL repeat my vote for a special number on neurology and hope many more will follow.

Every number of TIMES AND REGISTER is excellent, and the journal is an essential to my table weekly.

May its shadow never grow less.

TRUMAN COATES, M. D.

RUSSELVILLE, PA.

[Dr. Clevenger is preparing a Neurological Number, probably devoted to locomotor ataxia. Send in your questions, to be answered in that number.]

CYSTITIS WITH COMPLICATIONS.

[See TIMES AND REGISTER, November 12, page 541.]

I HAVE taken, as you suggested, forty grains of salol daily, in hot water, before meals, and will finish an ounce of the salol this week. I am considerably better in my stomach; my appetite is very good, my food digests better, and does not sour. I do not get up as frequently at night to urinate. The spinal symptoms are about the same. The bowels do not move without enemas. My general health is better, and I think of resuming my practice in the Spring. What shall I do? J. M. R.

[By all means continue the salol as long as the improvement continues. Faradization would be useful to the spine and rectum, with massage of the spine and legs —ED. T. AND R.]

MATERNAL IMPRESSIONS.

IT is a fact, well established in my mind, that a woman produces certain marks or impressions on the fetus she carries in utero. At what time, or from what cause, these impressions are produced I cannot say. But the fact of such impressions is established by the following cases:

Mrs. P., while pregnant with her little boy, now eight years old, was frightened by a lizard. The boy carries a likeness of the reptile on his thigh.

Mrs. A., when she was carrying her youngest daughter, had a voracious appetite for blackberries, which was not satisfied. As a consequence the daughter has a picture, or impression of two blackberries on her right temple. However instead of being black they are of a lighter color than the general complexion, and when she blushes they are peculiarly noticeable by their turning white instead of red.

Mrs. H., in her first gestation, I don't remember the exact period, had a

scuffle with her husband. At the time he was trimming his finger nails and had a penknife in his hand. In the tussle she grasped the hand that held the knife, and cut her fingers badly. As she looked at the bleeding fingers she cried bitterly, and felt a peculiar sensation in the region of the womb. She knew the fetus would be marked and told her husband so at the time.

In due time I delivered her of a daughter, the corresponding hand of which had only two perfect members, one finger and a thumb. Two were absent and one was deformed so as to be of no use. We tried to deceive her at first, but as soon as we laid the little one in the bed by her side, she sought the crippled hand at once and wept bitterly. She knew it was marked.

I could cite you to many more examples in my practice, such as ginger cakes, hog livers, fish marks, etc., caused by fright and unsatisfied appetites, but these are sufficient, I think, to establish the fact. In conclusion I will say, if I am not in the right, I am open to conviction. I am laboring for the truth.

A. N. SPURGEON, M. D.

KOSSUTH, INDIANA.

FOR WHOOPING COUGH.

ENCLOSED find a prescription for a remedy of utility in whooping or chin cough. It possesses specific properties in as great a degree in whooping cough as iron preparations do in erysipelas. The use of scullcap for this spasmodic cough is original with me in uncomplicated whooping cough:

℞.—Ext. Scutellariæ fl. . . . . ℥ii
Ammonii Chloridi . . . . . ℥i
Pulvis Cinchonæ Rubræ . . . . . ℥i
Spir. Ammonii Arom . . . . . ℥i
Spir. Gaultheriæ . . . . . m.x.v
Spir. Frumenti Opt . . . . . ℥i
Mel. Despumati . . . . . ℥iv
Aquæ . . . . . q.s. ad f ℥iv

M. S.—Give from 15 drops to ℥ii according to the age, 4 times each day.

R. S. PATTERSON, M. D.

BRIDGEVILLE, PA.

ENCLOSED please find $3.00 for which send me THE TIMES AND REGISTER for 1893.

I congratulate you on the success of your journal. The special numbers are excellent and will remain standard books of reference for a long time.

THOS. W. MUSGROVE.

PUYALLUP, WASHINGTON.

I SHOULD like very much to see a special number on impotence and irritation of the urethra and terminal vesicles. Also one on asthma, chronic bronchitis and emphysema—three links in our chain—which would include the heart complications attending the above named affections. Your special rectal number is an interesting and valuable one.

DR. C. L. GREGORY.

YREKA, CAL.

Book Notices.

THE PHYSICIAN'S VISITING LIST. Published Annually for Forty-two Years. Lindsay & Blakiston's.

It is arranged for 25, 50, 75, and 100 patients per day or week, dated and undated, with or without interleaves for special memoranda. A new undated Monthly Edition has also been added to the series. The large sizes can be had bound in two volumes, each volume covering six months, for greater convenience.

No better evidence of the practical worth of this book can be offered than the uniform popularity it has enjoyed, notwithstanding the competition of various imitations published during the past few years.

NOTES ON THE NEWER REMEDIES. By DAVID CERNA, M. D. Published by W. B. Saunders, Philadelphia, 1893. Cloth, 8vo., pp. 177, Price. $1.25.

A very useful little book.

The "not very brilliant Satellite," as a correspondent recently denominated it, is now to be a full-fledged medical monthly, known as *The Universal Medical Journal*.

HANDBUCH DER OHRENHEILKUNDE. PROF. DR. HERMANN SCHWARTZE. ERSTER BAND. Mit 133 Abbildungen im Text. Leipzig. Verlag von F. C. W. Vogel, 1892.

FOOD IN MOTHERHOOD; OR HOW TO MAINTAIN HEALTH. By EPHRAIM CUTTER, M. D. London: David Stott, 370 Oxford St., W. Price, One shilling.

THE STANDARD DIARY FOR 1893. Published by the McArthur Hypophosphite Co., Boston, Mass.

A very neat little pocket diary, with calendar, tables, dose-list, etc., etc. If you have not received one yet, write to the publishers and get it, free of charge. It is well worth the trouble.

UNIVERSITY OF NEBRASKA BULLETIN OF THE AGRICULTURAL EXPERIMENT STATION OF NEBRASKA. ART. I. The Corn Fodder Disease in Cattle and other Farm Animals, with especial relation to Contagious Pleuro-pneumonia in American Beeves in England. By FRANK S. BILLINGS, Director.

TEACHER AND STUDENT. Address, By WM. OSLER, M. D. Baltimore: J. Murphy & Co.

TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY. 25th Annual Meeting, July 19, 1892. Vol. V. Part 2. Published by the Society.

LA PRATIQUE GYNECOLOGIQUE ET OBSTETRICALE DES HOPITAUX DE PARIS. Par PAUL LEFFERT. Paris: J. B. Bailliere et Fils. 16 mo, pp. 300, cloth. Price, three francs.

A compilation from the works of sixty of the present teachers of these branches in the Paris hospitals. Arranged alphabetically by diseases.

The Medical Digest.

THE HYDROTHERAPY IN TYPHOID FEVER.

SIHLER thus sums up an interesting paper on the Brand method (*Med. News*, Nov. 19, 1892):

1. Americans, women, children, and men, alike, experience the same beneficial effects from the cool baths that European patients do.

2. In cases in which the baths fail to reduce the temperature of the patient, they should not be discontinued; they will still have a beneficial effect.

3. The prolonged lukewarm bath (from 90° to 96° F.), with gentle effusions of cool water (from three to four pails, of from 60° to 70° F.) to the head is often an excellent remedy in case of great excitement and inability to sleep (*delirium versatile*).

4. Women take to the baths more kindly than men.

5. When the fever is very high and the elevation of temperature is marked soon after a bath, it is advisable to repeat the baths sooner than the formula requires (three hours), and to give them every two hours.

6. Even when patients have reached the third week, and with hemorrhages, baths, and water more or less cool should be used according to the directions of Brand in the treatment of the "degenerated" cases. Parched, smooth, fissured tongues are unknown to the hydriatric treatment.

7. The method can be used in country practice.

A few words of advice to those thinking of using the hydriatric method in private practice may not be out of place here.

1. First of all get a bath tub made. I had one six months before I had a case. My tubs are made of galvanized iron, with a strong iron rod around the rim, four-cornered, 5¾ feet long, 2 feet wide, and 16 inches deep. If you will have a tub you will use it, and if you have your tub, thermometers, etc., on hand, your patients will be under the impression that you know all about the method. My bath-tubs are amongst the most useful of my instruments.

2. Be present during and after as many baths as possible, and especially at first; this both for the patient's sake, who will be encouraged, and for your own sake, who will be instructed.

3. As soon as possible instruct one or more suitable persons in the use of the method. Well-to-do persons will be glad to employ them, and even those less favorably situated can have a nurse, because not much money need be spent for drugs, and because the physician can restrict the number of visits if one of his trustworthy nurses is taking care of the patient. If the family wishes or is compelled to do its own nursing, you may send such a skilled person to the house for from twelve to twenty-four hours to give instructions in the use of the baths, thermometers, etc.

4. Do not propose the method in a half-hearted way. If you are convinced that Brand and his followers are in the

right, tell your patient that you consider it your duty to use the method. If your patients are like mine, not more than one in twenty will refuse to take the baths.

5. Let your first case be one that you can treat from the beginning and treat accurately and strictly after Brand, so that both the community and yourself will not lose confidence in the method.

6. Follow the directions of Brand, Bouveret, and Vogl, as closely as possible, and do not "improve" on the method before having used it for some time.

In my opinion the physician who will use the hydriatric method will find nothing but gratitude on the part of the patient and his friends; in treating typhoid fever he will become acquainted with the useful qualities of water as a remedy, and employ baths in other febrile diseases, such as scarlet fever, measles, pneumonia, etc., and he will thus be worth much more to his patients than he was before using the baths; he will find the hydriatric method not only satisfactory from the humanitarian standpoint, but he will also find it interesting from the standpoint of the scientific observer and physiologist. He will save the lives of some and shorten the sufferings of many.

"The physician, however, who has become convinced of the method and has not the courage to combat all the obstacles does not stand on the pinnacle of his profession." (Vogl.)

Brand, Juergensen, Vogl, Glénard, Tripier, and Bouveret have made it so easy for us to carry out the hydriatric treatment that we merely have to follow their directions. And why should we not do so?

News.

THERAPEUSIS OF PIPERAZIN.

ACCEPTING the very clear and complete clinical researches of Biessenthal, Schweninger, Ebstein, Vogt, Gautrelot, Heubach and other well known physicians, general practitioners have made many interesting tests of piperazin and have arrived at some very satisfactory conclusions concerning its value. Its chief therapeutic indication is the uric acid diathesis, or the dyscrasia resulting from that condition. It is unquestionably, the most energetic solvent of uric acid, and uratic concretions which may be employed within the human organism without producing toxic effects. With uric acid it forms a neutral, soluble combination while, at the same time, it dissolves the various albuminoids and their homologues. Prescribed in combination with phenacetine it has very marked influence upon the gouty condition and promotes the absorption of undesirable exudates. The value of piperazin in both acute and chronic gout, appears to be very decided. Schweninger reports success in 92 per cent. of his cases, and states that he could get no such results with any other remedy. Biesenthal also administered piperazin in gout, in renal colic, and in urinary hemorrhage with perfect success. He gave it in carbonic acid water, 1 to 500. The ordinary daily dose of piperazin is fifteen grains. Some clinicians begin with three grains per diem, or one grain doses t. i. d.

A great drawback in the employment of piperazin has arisen from the fact, that while in many cases, its use must be continued for a certain length of time in order to obtain its best effects, the cost of the medicament has been so high as to practically preclude its general use. It is gratifying to learn that through the enterprise of the Farbenfabriken vorm, Friedr. Bayer, & Co., (whose laboratories are at Elberfeld), a new process for the preparation of piperazin has been discovered, and, through the use of that method, the cost of this valuable new remedy has heen reduced to about one-half of its former price.

Descriptive pamphlets of this product may be obtained from W. H. Schieffelin & Co., New York, who are the agents for this well known laboratory. Other products of the Farbenfabriken, such as phenacetine, sulfonal, europhen, and the later products, salophen, are now employed frequently in general practice.

Dr. Nicholas Senn, of Chicago, is now preparing a "Syllabus of Lectures on the Practice of Surgery," arranged in conformity with the "American Text Book of Surgery," which will be a valuable aid to all who have this great book.

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